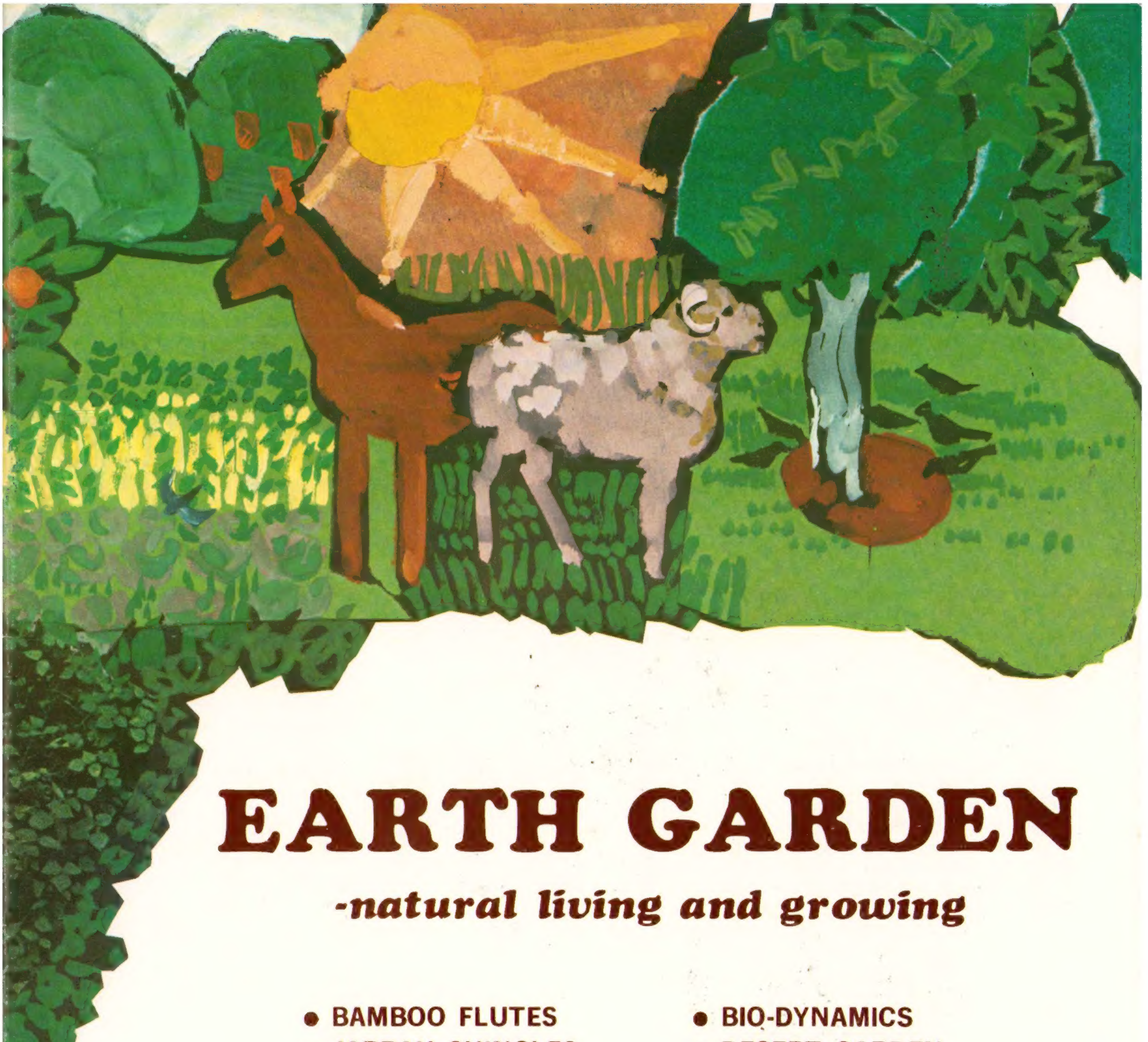

EARTH GARDEN

-natural living and growing

- BAMBOO FLUTES
- JARRAH SHINGLES
- BUILD BEEHIVES
- ADOBE SHELTER
- MAKE A TANDEM
- BIO-DYNAMICS
- DESERT GARDEN
- GEESE & GUINEAS
- EARTH PEOPLE
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PLUS: FULL INDEX TO THE FIRST NINE ISSUES

No. 10

SEPTEMBER, 1974

$1

SPRING

Registered for posting as a periodical. Category C.

CARROTS

In a Garden there be Turneps and Carrets which serve for sauce, and if meat be wanting, for that too.
WILLIAM COLES,
The Art of Simpling,
1656.

Imagine you were there. You know what the plants like. For instance, you're a carrot. Now what do carrots like? Well, you want to thrust away down into the soil. So you don't plant carrots on terribly hard soil . . . only the short variety.

That sort of realisation comes out of empathy with a plant. Carrots like to sit in the ground for long periods, through the summer and autumn. You plant them very early in the year. If you plant them just before spring they get a terrible shock. They try to race through, and produce a slender, thin little carrot. Then they flower and drop seed and the seed comes up straight away.

The carrot, then, behaves the way it feels. It likes to store up tucker in a carrot. It hates forming a little wee string and a flower almost before it's a plant. I grow my carrots in fairlv hard soil with not much water, but soft enough for them to get through.

When I say hard, I mean it's hot and dry in summer. I wouldn't grow lettuce where I put my carrots. They'll sit there three, four or five months without any water if there's a drought on. Then, finally, when it rains, perhaps quite late in the winter, the carrots will suddenly become carrots. They've sat through. They'll put on tops if they haven't got any tops. They might get frosted, but they come up, get frosted again and you can eat them. They taste beaut. They're all the sweeter for having had a hard time.

NEIL DOUGLAS, 1974.

The leaves in Autumne turne to be of fine red or purple, the beautie whereof allureth many Gentlewomen oftentimes to gather the leaves and sticke them in their hats or heads, or pin them on their armes in stead of feathers.
JOHN PARKINSON,
Paradisi in sole Paradisus Terrestris, 1629.

Carrets are good to be eaten with salt fish. Therefore sowe carrets in your Gardens and humbly praise God for them, as for a singular "great blessing".

Admit if it should please God that any City or towne should be beseiged with the Enemy, what better provision for the greatest number of people can there be then every garden to be sufficiently planted with Carrets?
RICHARD GARDINER, Profitable Instructions for the Manuring, Sowing and Planting of Kitchen Gardens, 1599.

ISSN 0310-222X

EARTH GARDEN No.10

EARTH GARDEN presents a range of natural lifestyles. It is intended as a key to sources, practical ideas, alternatives and self-sufficiency.

EARTH GARDEN is concerned with non-polluted living and growing, the back-to-the-earth movement, surviving in the city, the bush, food and diet and the inner changes which follow when you are in tune with Nature.

Let us lead you up EARTH GARDEN's path to the good life.

There are still no advertisements in EARTH GARDEN. Books, places and products recommended are those we think relevant.

Edited and published by Irene and Keith Vincent Smith.

Illustrations by Helen Haggath.

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Here we are with EARTH GARDEN 10!

Who would have believed it in January 1972 when we put together the first issue? We wouldn't have! So this issue is a special landmark for us as you can imagine.

To celebrate we've splurged on this beautiful colour cover, with original art work by Verdon Morcom. We wanted to say "au revoir" in a way which everyone could share.

We told you we were due for a break after EG10. Well, the good news is that we will be back in print sooner than we had expected. EG11 will be out next March and there will be the usual four (quarterly) issues in 1975.

During the recess we'll be moving to our "Sun Cottage" to settle in the country, fix up the house, plant the fruit trees and start the garden we have always wanted. This way we'll be able to have the best of both worlds — writing about the good life and living it too.

Hundreds of you have written asking us to come back soon, so we've made the break as short as we can. It will be a busy time for us, so please accept this as our personal message to each of you about the future of EARTH GARDEN.

During three years of publication we have been able to absorb many cost increases and kept the price of EARTH GARDEN at $1.00. This is mainly because we are a two-person magazine and, do most of the writing and all of the editing, layout, bookwork, distribution and subscriptions ourselves.

Now, sadly, we have been forced to lift the price. Our printing bill doubled in the period from EG3 to EG8 (and the rate seems to be increasing), while postage has risen sharply and will obviously rise again.

We have no way of knowing what production costs will be next year (and nobody will give us a quote), but we're prepared to stick our necks out and offer the four 1975 issues, posted to you, for $5.00.

This offer is good at this price only until March 1, 1975. After that, subscriptions will be offered at prevailing rates . . . which are sure to be more. Order forms are inside the back cover.

So now the first series of EARTH GARDEN is complete, making up a survival manual of more than 570 pages. The set is still available at $11.00, including postage, or individual copies at $1.20 each.

During the next few months we will be selecting material from EARTH GARDEN to make up an anthology to be published by Thomas Nelson (Australia) Pty Ltd. We want it to be a more permanent record of the best and most helpful stories from the magazine — an Australian guide to natural living and the close-to-the-earth philosophy and practice.

The EARTH GARDEN Book is due for release next April. It will have 256 pages (EG size), and will be available from us at a cost of $6.95, plus 60 cents for postage and handling.

Meanwhile you can keep in touch with us by reading our regular Self-Sufficiency column in The National Times.

Thanks once again for all your support and encouragement for us, and for EARTH GARDEN. It makes us feel that we're really doing something worthwhile. That helps a lot when the workload is heavy, knowing that just opening each day's mail is a delight.

Our address is still the same: EARTH GARDEN, PO Box 111, Balmain, NSW 2041, Australia.

Peace and love,
Keith and Irene.

Our garden is in a valley in the Musgrave Ranges. The alluvial soil is a result of weathering of the surrounding granite ranges.

Our desert garden

BY MIKE LAST, PUKATJA COMMUNITY INC.

Most Australians (and Earth Gardeners) live in moderate to high rainfall areas within the tropical and subtropical regions of our continent. Not so in our case. Our garden is at Ernabella, 270 miles south-west of Alice Springs in the Northern Territory.

The climate is extremely dry, with an average rainfall of eight inches (200mm) each year. Summer temperatures are high, maximum 95 to 100 deg F and winter temperatures low, minimum 26-36 deg F.

With these climatic conditions prevailing it is difficult to maintain soil moisture. There are problems in keeping compost heaps working because of the dryness. Soil bacteria populations are low, as soils vary between wet and dry when using sprinklers to irrigate.

The rainfall is insufficient normally to allow production of vegetables and other fruit crops.

A few years ago a friend in Alice Springs introduced me to the idea of trickle irrigation. This ingenious method of irrigating desert soils allows for a relatively constant soil moisture to be maintained.

Evaporation losses are very low because the water drips from a dripper on to the soil and is quickly absorbed. Much of the soil surface remains dry, which acts as a valuable mulch. The soil below, because it is so moist, continues to live with its teeming bacteria population.

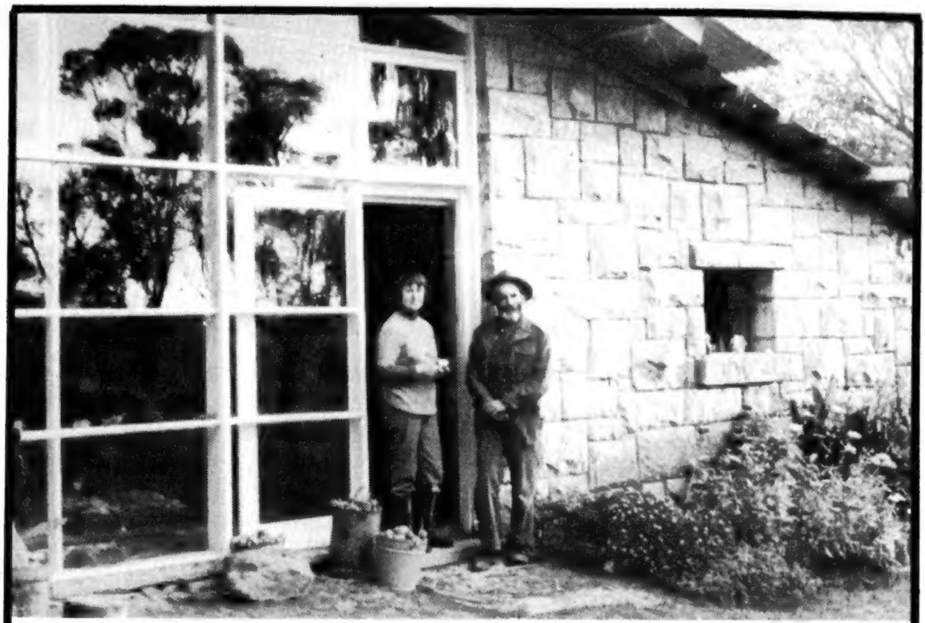
Earthworms at first did not exist, but now, under these better conditions of soil moisture, they appear in large numbers. Manures and compost are of more value to plants and the quality of vegetables and fruit has been very satisfactory.

In the four-acre garden we grow sweet potato, tomatoes, carrots, silver beet, onions, artichoke, peanuts, strawberries, watermelon, pumpkin, grapes, citrus and others. Most of the produce is sold to the local Aboriginal and European population.

This particular project is relating to local Aboriginal people, who are learning more about organic gardening.

We have 150 laying fowls now and will have another 600 by the end of the year. The fowl shed will be a future source of organic fertilizer. All manure is presently carted from local sheep yards.

Drying out of the soil was our first and biggest problem. Now, using Driplex drippers (delivering 2 gal/hour at 15 pounds per square inch) trickle irrigation has made gardening in the desert very interesting and rewarding.



This is the house that Trevor built

By TREVOR QUIRK

Joan and I didn't have to search for our Shangri-la — we've lived here all our lives.

At the foot of a 1000 foot mountain, close to a small hill, our home is overlooked by an old granite house which was built by one of my great-grandfathers. To the south another solid dwelling is still lived in by relatives descended from other grandparents.

To the west only the chimneys remain of my parents' home. It was burnt down in the bushfires of '69. And all around are relatives and friends and memories of relatives and friends who have gone who-knows-where. Perhaps to the cities, like nearly all the young folk?

Our own house is built from granite and hugs low to the ground, surrounded by pine trees and oaks (which we grew from seed) and willows and fruit trees and shrubs and flowers. There are gum trees too (they just grew by themselves).

When we first came here we had a tiny little old weatherboard house. It sat in the middle of a bare paddock. We didn't even have a fence. One large red gum to the north and a little sapling have both grown and now the sapling is a large red gum and the bigger redgum is a monster.

Right from the start we had our garden, small because of the lack of water, and as soon as the fences came the animals began to move in. Goats were rather unmentionable in those days, but cows were cheap. **When you had a cow you had all your milk and butter and a calf to raise, and perhaps a pig and the chooks had any leftover milk.**

Each of the cows had their own identity and their own troubles and each pig had a character I am sure. They were much more friendly than any of the cows. The main troubles with the pigs were when they were little and escaped. The cows didn't want to go anywhere, but had their sicknesses.

Water was the first object and this was supplied from a nearby water channel. The one-inch pipe cost the terrible sum of 74 pounds ($148) when wages were six pounds ($12) a week, but we had the water laid on — it was needed for a garden in this low-rainfall area.

Then came fences and fruit trees and grape vines and children.

In 1951 I stopped working in an orchard and became a quarryman at the local granite quarries. This meant much better wages and, what is more, free stone. We had an old 1925 Chevy ute (bought for 100 pounds) on which I built a van body. In this vehicle I began to bring home eight pieces of granite at a time.

I tried out my skill as a builder in stone on a garage which shows quite distinctly where I started and where I finished by the quality of the workmanship. Next project was a workshop at the side of the garage and then, with great joy, the start on the house.

Don't quite know what year that was! My diary indicates that the garage was finished in 1952, so it was probably '54 — there are large gaps in the diary at that time.

Progress was very slow. It was certainly a labour of love. I only worked at it when the spirit moved me, and there were many days not available because of apple picking and pruning at weekends for various orchardists. Children were still coming and had to be fed and clothed. Even at this stage lots of our meals were almost completely grown on the property.

The back doorstep has "1960" chiselled into its riser side. That date is fixed. From then on progress was slow but sure. The kitchen was finished and put into use. As it was 15 inches lower than the rest of the house we had a split-level home!

Children were growing too quickly — had to build the south part of the house from fibro for speed and economy. **Believe me, if you want to build quickly, don't use stone.**

The year of the drought and the bushfire — 1969 — was the year we really got moving. We finished off the granite work in time to put the main roof on completely over the remaining part of our old house.

We also built a large dam in the gully and stacked it with redfin. This solved our water problems, and gives us a fish dinner sometimes.

One day a friend and I laboriously moved a heavy beam right around the house to the front door, then back through the house to its final position — where it wouldn't fit until we put one end out the window into nearly the same place from which we had started!

The rain threatened to pour on every one of the roofing days, but didn't. The only window into our 32 x 18ft living room is to the north and is 12 feet wide and 13 feet high in the centre. This we filled with timber lattice and plastic sheet which flip-flapped to-and-fro whenever the wind blew. It wasn't very easy to see through, but the Shoji screen effect was pleasing.

Through the next year some of the waste sawn-granite flooring was put in, followed by the front verandah the next Christmas. That brings us up to last year, 1973, and the decision to give up my permanent job and live from our garden and from building adzed furniture.

Then came the start of the big garden. We got the whole two acres deeply chisel-ploughed, which I think was a mistake, because the weather immediately went wetter than it should have and stayed that way, making it the wettest season in years. The soil absorbed it all and held it, but the garden took well.

Strawberries from Mary's (Mary's Place, EG9) were first in, then beans, tomatoes, sweet corn, pumpkins, sunflowers and ½ bag of spuds. One huge patch of what I thought were cabbages all turned out to be Brussells sprouts. We are still eating and enjoying the best sprouts we have ever grown.

Carrots were difficult to separate from the clover which germinated much more prolifically and constantly, but after five intricate hand weedings we won. We put in silver beet, cauliflowers, gourds, marigolds (do they keep pests away?), beetroot, capsicums, a whole big patch of maize and parsnips.

Problems: No 1 peamite (comes early in the season, but dies out in the heat). Grasshoppers caused a lot of damage to young beans, cabbages and caulies and were with us all summer. Green grubs (Derris dust). And mice. They ate a lot of ripe tomatoes, some pumpkins and stripped some of the early corn.

I like gardening, and what started out to be a subsistence garden turned into one which had some large surplusses, even after bottling, salting, drying, bagging, eating and friends. It took far more time than we had intended.

Buckets of tomatoes left out for sale by the roadside on the "honour" system, with a price tag and a "Please leave the bucket" sign, were quickly emptied and paid for. One bucket disappeared, but came back home three weeks later.

Now it is winter. The garden looks bare except for the dry maize stalks, the sagging bean trellis and surviving Brussells sprouts, caulis and cabbages. But there are bags and drums of potatoes. One old refrigerator, placed on its back, makes a good potato storage bin. Old wine flagons contain sunflower seeds, haricot beans and maize.

Bottles of tomatoes and peaches, apricots, cherries, nectarines, pears, apples and raspberries are sitting in the partly-finished cellar. Most of the fruit is bartered for vegetables, as our trees are mostly too young. Two 5-gallon earthenware jars are filled with salted beans and there's a jar of brandied fruits for very special occasions.

A large heap of maize cobs are drying in front of the window on the living room floor. They're colourful, but I don't know where to store them. The winter passes and plans are growing for next year's garden. The biggest difficulty is going to be keeping it small.

Trevor's granite compost heap.

The flute family is basically divided into two groups. The first is fipple flutes, where the sound-making mechanism is incorporated into the instrument and all one must do is blow to produce a tone.

Recorders, flagolets, gemshorn and the "pipe" of the pipe and tabor of Medieval times fall into this group.

The second group differs in that air is directed by the lips against the embouchre aperture of the flute, thus producing the tone.

The flexibility of the lip-instrument relationship allows for a much greater range of expression, tones and tonal nuances than the recorder family.

This second group includes the most beautiful and best-known flutes of the world: the shakuhachi of Japan, quena of South America and the nay of the Arabs as well as European military fifes, concert flutes and pan pipes.

It is considered that these flutes were introduced into Europe in the 10th or 11th century from Asia.

Local products used to make flutes include bamboo, bark, animal horns and bones, lathe-turned wood and metal, including silver and gold. Even plastic conduit pipe may be used.

Eleventh century flute: The discovery of this wall-painting in the Cathedral of Kiev, south-west Russia, shows the antiquity of the transverse form of the instrument.

Bamboo

STORY: BOB MAGNUS

We're interested in the lip-produced sound type of flute because of its greater expressive possibilities. Bamboo is available locally, very responsive and generally most suitable for home-made flutes.

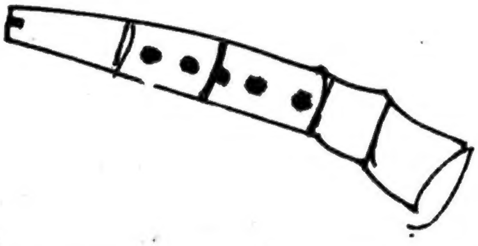
These flutes have a practical range of 1½ octaves, though two full octaves may be coaxed out of them with practice.

Basically such a flute is a length of bamboo with the interior nodal joints knocked or burnt out and seven holes stuck in it — one hole to blow across and six holes to finger.

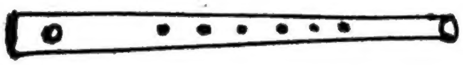
I guess it's where the holes go that's the important thing.

I use local small bamboo, which at maturity is at most 1-1¼ inches through and about 20 feet high. The best section for flutes is from about two feet from the ground to five or six feet, or where the branches begin.

One should only cut mature three-year cane and leave it in a dry spot for about six months to really dry out well. Then it'll last for years and never crack. The beautiful shakuhachi is made from a special bamboo in Japan. The bottom-most piece is used. Usually the shakuhachi is flared out.



However, for some acoustic reasons most people throughout the world play and make their flutes the opposite way, with the opposite end at the embouchure or blowing end and contracting downwards.



This gives a better range and plays in tune better unless you're a shakuhachi master, that is, and have studied 12 years or so!

Okay, we have a tube — bamboo or whatever. Now for a flute that's in tune so that you can play with piano or guitar, you continue like this:

Saw off 18 inches of bamboo with an internal diameter of 17-20mm. Carefully remove the nodal sections inside and smooth out with a big rat-tail file. Then stick a wine cork (red preferably) in the widest end to the depth of one inch.

Now drill or burn the embouchre, or sound-producing hole, 1½ inches from the end of the flute. This hole

flutes

PHOTOS: ED DOUGLAS

should be elliptical in shape and about ½-inch wide.

Get a fine rat-tail file and undercut the edge of the hole so that the edge against which the air stream is to be directed is sharp. Today most flutes are played to the right — I think this is most suitable, but suit yourself.

Now you've got a tube blocked at the top, open at the bottom a hole 1½ inches from the top end. Start blowing across this hole so that some air is deflected into the tube and some out.

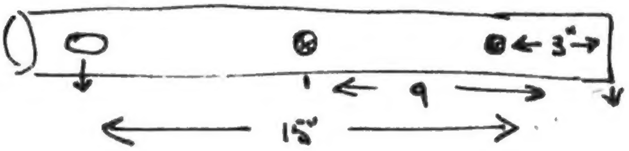
By twisting the flute forwards and backwards and blowing with a small hole with the lips, you'll soon get a sound — usually not too pure, and a bit thick, but it improves with time.

When the tone is fairly pure and constant and you don't get too dizzy, get to a piano or treble recorder and compare tones. Your flute should be sounding roughly F, which is 1½ octaves above middle C on piano or all seven fingers on the recorder.

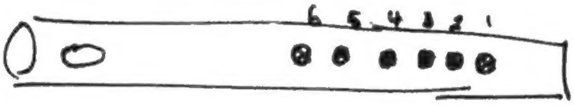
You now have to shorten the tube gradually so the tone becomes higher and you can blow a G corresponding to a G on the piano or six fingers on the treble recorder. As a general rule you can say a ½-tone, or semitone equals ½-inch of flute, so if you are a full tone under G, remove one inch and so on.

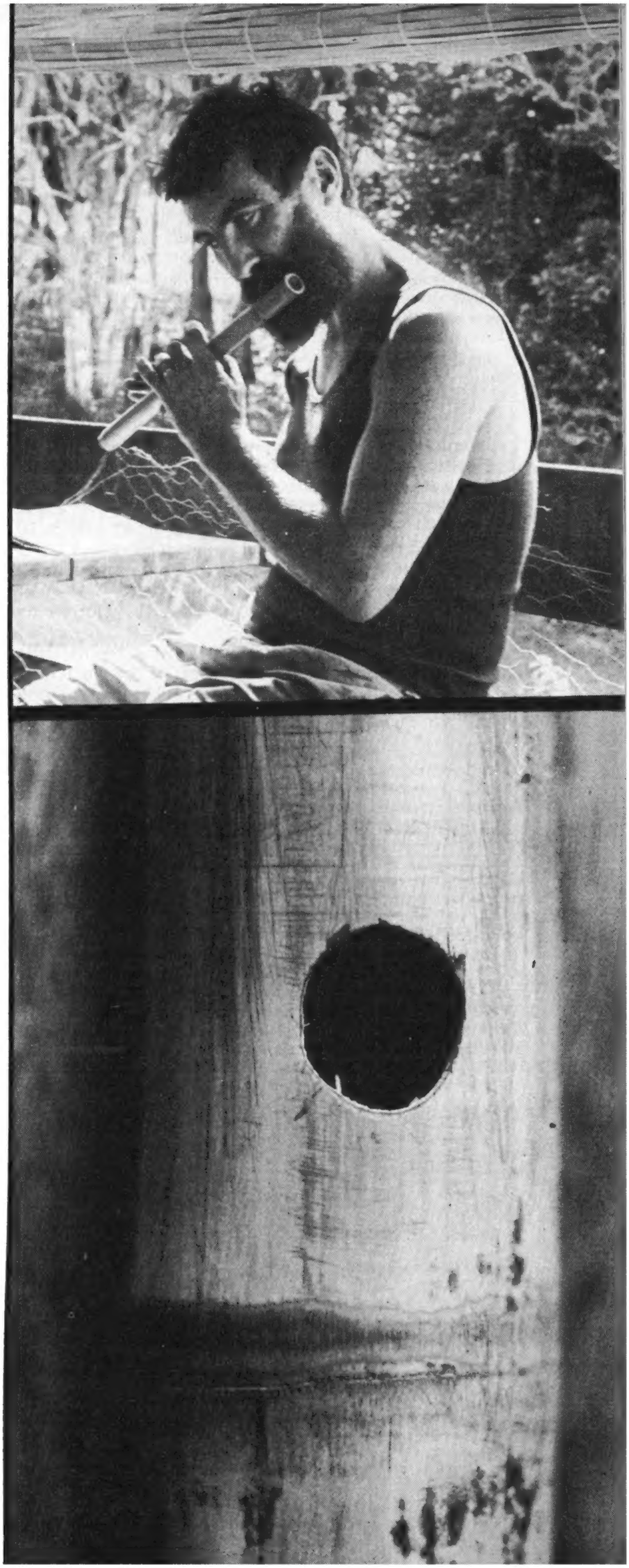
Finally, after astute listening and by sawing off short bits, you'll finally blow a nice full G. You still only have the basic tube with only the blowing hole, but you're now blowing G, the bottom note of the instrument.

Now the holes for fingering: measure from the centre of the embouchure hole to the end of the flute and take this length and divide it into fifths. We'll say for convenience the blowing length is 15 inches from the centre of the hole to the end.



Now take 1/5 and 3/5ths of this total length, in our case 3 inches and 9 inches, and mark these back from the end of the flute. These two points represent the top and bottom finger holes. Don't bore any holes yet.

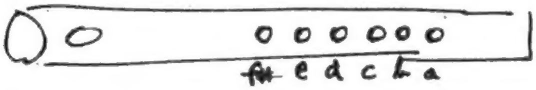




Bob Magnus making music with his own bamboo flute. The embouchure hole of Bob's flute.

Take this distance — in our case again this is 6 inches — and divide it again by fifths, which is 1.2 inches apart for the 6 finger holes. This varies a little, but generally throughout the world one uses the first, second and third fingers on each hand. Now to drill, bore or burn in the holes.

It's important to make each hole and tune it individually thus: The first hole towards the nether end, drill with ¼-inch bit, then blow it and compare it with A on the piano. If it's flat, enlarge the hole with the small rat-tail until it's in tune. If it's good, leave it alone — if it's sharp burn this flute and start again.

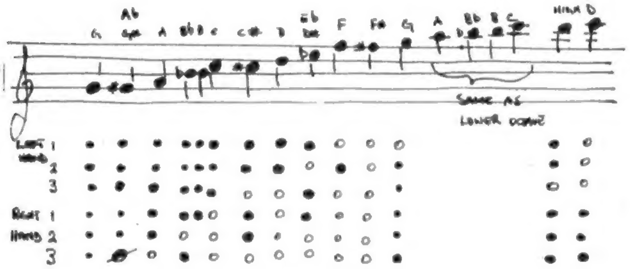


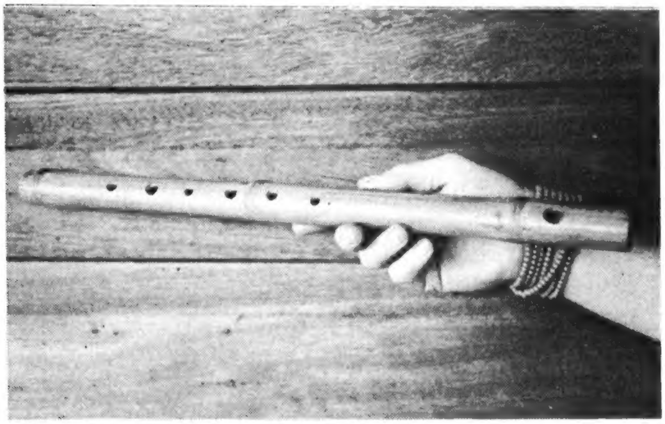
When "A" is in true tune, work up the flute so to B, C, D, E and lastly F# which is the last hole, all holes open. If you now cover all the holes with your fingers and remove them one by one, the tones are G — all 6 fingers on; A — 5 fingers; C — with 3 fingers; D — 2; E — the first finger of the left hand only; and F# — all fingers off.

By overblowing bottom G (6 fingers) to make high G, you'll get the 8 notes that comprise the diatonic scale of G major. The basic scale of this flute is G major — it's called a flute in G.

Also, when you get sick of just blowing the diatonic tones, you can cross-finger to get most of the chromatic notes on the scale of which there are 12. These are on the fingering chart:

FULL FINGERING CHART





The bamboo flute when finished.

storage

BY KEN BAILEY

Coming events are casting their long shadows well ahead for all to see. Economists, scientists and conservationists have all come up with the identical period when the supply of most strategic materials will dry up — the early 1980s.

So we have about eight years warning. I am not concerned with pinpointing specific crisis points, but to set out the way EARTH GARDENERS may alleviate some of the worst effects of this coming time.

Primarily this article is directed to small acreage holders, say from one to five acres, who have neither the space nor resources to grow all they will need.

The rationale behind a good storage shed is that it is economically more sound to invest in certain commodities than to attempt to grow them on your own holding, and so to free your land for fresh, seasonal vegetables. Optimising labour and time also demands that we do not work like coolies when produce is available from other larger sources.

The storage shed should be of strong, sound construction, preferably with a concrete floor to discourage pests and varmints. Walls and roofing of 26-gauge galvanized iron are acceptable, as long as there is adequate insulation against excessive summer heat. It must be dry and cool. Wide wooden shelving is mandatory, with enough "breathing" facilities to circulate fresh air.

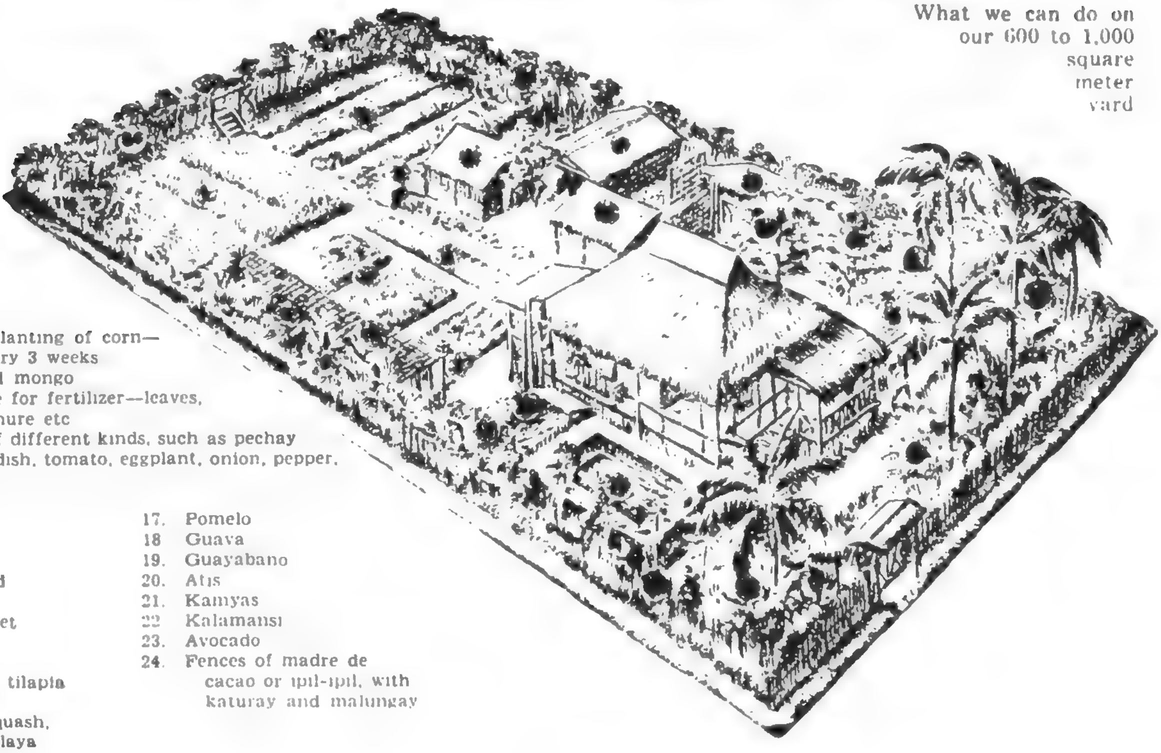
You should stock up on the following, which are not in any order of priority, but represent optimum stores of vitality available on this planet:

Bio-dynamically-grown wheat, honey, soybeans, powdered milk, brown rice, oats, other cereals, dried fruit, all types of beans, soybean flour, herbs and spices, nuts, bran and cheese. Buy large quantities for bulk discounts.

All you need now is to keep a few fowls and grow the seasonal vegetables, and you will have superior nutrition with time to spare to do your own thing, secure in the knowledge that you possess a year's supply of food in your store, or more if you wish.

I have a smallholding near Daylesford, Victoria, and would welcome contact from like minds in the surrounding area and also would like to hear from those interested in further detailed storage information.

MODEL OF SAMAKA HOMESITE FARM



What we can do on our 600 to 1,000 square meter yard

1. Succession planting of corn—4 rows every 3 weeks
2. Camotes and mongo
3. Compost pile for fertilizer—leaves, straw, manure etc
4. Vegetables of different kinds, such as pechay lettuce, radish, tomato, eggplant, onion, pepper, garlic, etc.
5. Coffee
6. Bananas
7. Pigeons
8. Pigshed
9. Carabao shed
10. Chickens
11. Sanitary toilet
12. Garden well
13. Ducks
14. Fishpond for tilapia
15. Papayas
16. Trellis for squash, upo, ampalaya
17. Pomelo
18. Guava
19. Guayabano
20. Atis
21. Kamyas
22. Kalamansi
23. Avocado
24. Fences of madre de cacao or ipil-ipil, with katuray and malungay

The Samaka Guide to Homesite Farming, compiled by Colin M. Hoskins, Samaka Service Centre, 1973 (first published 1954), 173pp. Price $A2.00 including postage, from: PO Box 2310, Manila, Phillipines.

The central aim of this book is to show the tenant farmers of the **barrios** and **sitios** of the Philippines how to plan their own subsistence farm in an area of from 600-1000 metres, which the country's laws allow for such use.

We think anybody interested in self-sufficient living in a semi-tropical area, such as northern Queensland, Papua New Guinea or the Pacific Islands should obtain a copy of this valuable guide.

Written in very simple English, it cuts through the technical jargon of agriculture and animal husbandry, providing a rational, easily understood plan by which a family can provide its own food.

Subjects covered include sinking a well for a home water supply, compost and fertilizers, seedlings, crop rotation, tilling, planting, special directions for each vegetable, herbs, mushrooms, fruit trees, coffee and cocoa bushes, a family poultry project, raising ducks without a pond, pigeons, turkeys, geese, how to raise a pig without buying feed, rabbits, keeping goats, fishpond breeding, preserving food and preparing for a fiesta.

Some of the fruit, vegetables and tubers have exotic names, but it is simple enough after a while to work out their local equivalents, for example **Papayas** (Paw-Paws), **chayote** (Choko), **cassava** (sweet potato), **mungo** (mung beans) and **carabaos** (buffalo).

The name Samaka is an abbreviation of **Samahanng Masagangang Kakanin,** which means, in English, a united effort of a group to provide more plentiful food for their families. "It is a plan, an idea, a way of life, the road to a better way of life," says the book's introduction.

Corn, Beans And Squash Together

A good way to plant for our pigs is to plant corn, then in the same row as the corn we plant sitao or other climbing beans and then in between the rows of corn we plant camotes (sweet potato) or squash.

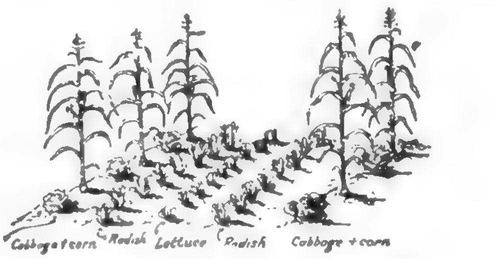
The reason this method is successful is now understood. The beans climb on the cornstalks so we do not have to place stakes for them. At the same time the roots of the beans bring fertility to the soil. The leaves of the camote or squash shade the ground and keep it from getting dry and stop the weeds from growing, so we do not have to cultivate.

Interplanting

One way to get the most production and a large variety of vegetables in our small lot is to plant quick-growing varieties between slow-growing varieties. Also we can plant one variety between rows of corn a month before the corn will be ripe.

Hill planting

This is the common practice of having 3 or 4 plants, growing in a small circle, 30 to 40 centimetres in diameter. Usually double the quantity of seeds are planted in the hills, evenly spaced, and after the plants are up, all except the strongest are removed.



Interplanting increases useful garden area.

Land Lines

Land lines is a free service for EARTH GARDEN readers. It is intended to help those seeking to buy or sell land or searching for it, and those joining together for group land buying or allied reasons. It is not a lonely hearts column.

Readers must give their full names and addresses as proof of their sincerity. They have the responsibility to thoroughly check all deals.

We have just purchased 25 acres of hilly but beautiful bushland complete with spring and surrounded by Crown Land. It is situated in the hop-growing district about 22 miles from Hobart, Tasmania. As we have more than ample land for our needs we are looking for a couple, preferably with a child, who are willing to cooperate in establishing dwellings for both families (we have log cabins in mind at present) and organic farming etc.

We are not fanatics — just interested in a simple life, with just enough gardening and animals to be self-sufficient. We are very musically oriented and would prefer similarly interested people. Open minded people interested in crafts, housebuilding, furniture-making etc, would be welcome.

We also run a well established little shop in Hobart, selling restored cottage furniture, utensils, crafts and musical instruments. Finally, we'd love to hear from anybody building or interested in log cabins in Australia.

Abi & Barb, Barb's Bazaar, 134 Elizabeth Street, Hobart, Tasmania, 7000.

We have a five-acre bush block about 25 miles east of Warrnambool, Victoria, adjoining the Brucknell Forest reserve. It has no modern conveniences — just a 12 x 28ft concrete hut and a 2000-gallon water storage tank.

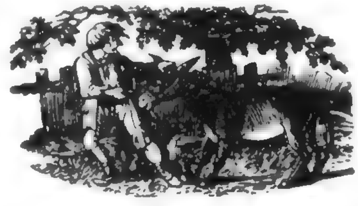
Although it is small we plan to have some chooks, vegies, goats and fruit trees. We would like to share the block with two to three families who are interested in building their own houses, organic farming and bush conservation. No cash needed to start, but we would have to work at regular jobs to save money to buy land for a decent-sized cooperative.

Anyone interested? Wendy and Peter Ockerby, 47 Swan Walk, Chelsea, Victoria, 3196.

We (one couple and three small kids) have been on our land for about nine months and have got a "vegie" garden going and five beehives. Next on the list will be some chickens and some fruit and nut trees. The only thing missing is neighbours with like ideas.

There are 34 acres behind us for sale, bounded on three sides by State Forest, with a nice creek forming one boundary. The land has never been touched and is completely covered by bush. We are about three miles from Cardwell, one mile from the sea and about two miles from the mountains. For more information write to us.

Harry and Tricia Banzhaf, C/- PO Cardwell, Queensland 4816.



We have 10-acres on the outskirts of Melbourne and are looking for someone to share it with us. We are in our middle fifties and are finding it too much to work the place alone. If we can team up with a young couple with energy, enterprise and enthusiasm, we could all help each other and have some free time.

The farmlet is reasonably equipped for the stock we have, though the house is very old and small and another would have to be built quite soon. There is a caravan available in the meantime. We have learned a good deal about how to do it and, more important, how not to, in the course of our life here and it seems a pity if we cannot pass on some of this to somebody who could benefit.

We are nature lovers and have planted Australian native shrubs and trees to encourage the birds and left some areas fenced-off, so that some natural growth remains. We also like music, though not very keen on the pop stuff. If anyone is interested, we would be so very glad to hear from them.

Mrs I. Dawson, Victoria Road, Pearcedale, Victoria, 3912.

There must be hundreds of people longing to join a farming community but who are unable to do so because of present commitments. Would any of these care to form a "suburban cooperative", or several if numbers warrant it?

Members could join in such activities as bartering, food co-op, clothing exchange etc. Perhaps it would be possible to rent a shop to use as a workshop, an outlet for handcrafts, or a co-op shop. What about a community school? Or a few acres in the bush for camping, or building mudbrick houses? Possibilities are endless.

Letters from country, interstate and New Zealand would also be welcome, and all would be answered.

Kath, Down-to-Earth Suburban Cooperative, C/- 21 Graham Avenue, McKinnon, Victoria, 3204.

We are prepared to spend up to $14,000 for 10-15 acres of land with a creek or river frontage and a dwelling of some kind. We would prefer, however, to find a few others with whom we could purchase some land and sub-divide it. Naturally, we would like to help each other build, plant crops and do whatever else is necessary to establish our farms.

The river is necessary because we want to set up a methane gas unit from manure and waste to operate our farm. It doesn't matter if others aren't interested in the self-contained farm system though.

We are not vegetarians, nor do we belong to any religious sect. Our hobbies include painting, pottery and filming and we're not afraid of hard work!

Steve and Sandi Bogar, 323 Centre Road, Bentleigh, Victoria 3204.

We're a married couple with two girls, both under five, all very much in need of land. Every spare weekend we go looking anywhere for five to 100 acres, but as of yet no luck. Oh, yes, we've found land but there's always the hassle of no electricity, no water or there's a proposed highway going ahead in years to come . . . and so it goes.

Could someone help in some way and point us in a direction or two? Or is someone willing to go halves or whatever in some acreage?

Yours sincerely, Tony Roberts, Flat 2, 65 Yangoora Road, Lakemba, NSW, 2195.

Our aims, like many people's, consist of striving for a natural, healthier life for ourselves and our children. This idea seemed far out of reach until recently when we were offered 40 acres in the vicinity of Eden on the south-east coast.

Through EARTH GARDEN we would like to hear from some friends interested in forming a small rural community, helping each other towards a more natural way of living and ultimately becoming self-sufficient.

Yours sincerely, Paul and Vickie, "Solros", Shephards Road, West Pennant Hills, NSW 2120.

We are hoping to form a group of people in our area for purchasing health foods in bulk. We are able to obtain such things as nuts (all kinds) and dried fruits (dates, figs, raisins etc) and would like to get to know more people who desire to live 'hygienically' and pass on the benefit of being able to buy these things a bit cheaper co-operatively.

We were most interested in your article Septic Gas (EG9) and it would be good to hear from anyone who has had any experience with this sort of system in Australia. We will be building a home shortly on our 20 acres and would like to incorporate a system such as this.

Sincerely, Ken Boness, 15 Wandsworth Road, Surrey Hills, Victoria, 3127.

We have a 150-acre (aerial) 30-year residential or industrial lease for sale for $10,000. The land is both tropical rainforest and eucalypt forest, and stretches along a permanent river (the Annan). There are also waterfalls, streams and pools. The soil is extremely fertile — I've never seen so many earthworms!

We've built a two-room cottage and cultivated a ¼-acre tropical garden. There's a water pump, wood stove, canoe, 13 free-range chooks (trained to return to their snake-proof house in the evening), a chain saw, gardening and tin mining tools and bee hives and extractors.

Helenvale (where the land is situated) is 20 miles south of Cooktown. You can find 'Mululuban' (the property for sale) just before the Wallaby Creek bridge.

Yours faithfully, Dan Paterson, 'Mululuban', Helenvale, via Cooktown, Queensland, 4871.

We are planning on moving to New South Wales very soon. We live on a farm here in California and raise our own eating animals and keep a garden. We would also like to find a small farm in Australia.

Janice M. Thompson, 5512 Potamac, San Diego, California 92139, USA.

We have 52 acres of rich farmland which we are planning to sell. It has been cleared (unfortunately). By no stretch of the imagination could it be called anything but flat. No 'improvements'. There are a few old trees dotted about the paddocks and about 10 or 15 acres of mature and young trees, mostly red gum and yellow box, with some blue gum.

It is very secluded, excepting for us — we have 120 acres across the diversion channel (which contains fish and freshwater mussels). We have geese, ducks, chooks, bantams, turkeys, beef cows, milking cows, pigeons, goats, sheep, pigs, horses, pony, dogs, cats, bees.

We make all our own food, raise it, grow it, trade for it and occasionally buy it, work the farm organically and we're getting into making our own clothes. Anyone doing the same across the channel would have the use of tools, excess food, advice and co-operation. I've ordered a Cinva-Ram and we're doing a lot of building with mudbricks next summer.

We need to get $120 an acre (which we can get from local wheat farmers) so that's $6,240. If anyone is interested, they could write and come and visit.

Bob and Sue Bender, Wayside, Delivery, Drung, via Horsham, Victoria, 3400.

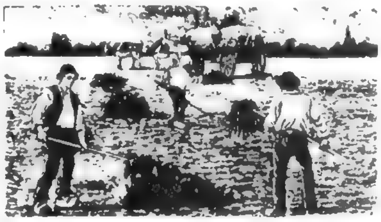
We have intentions of starting a community based upon natural lifestyles near Margaret River in the south west corner of Western Australia. We have a beautiful property lined up but its price is well above our means — 460 acres costing $50,000. We were thinking of dividing it amongst 10 families, but we're open to suggestions.

Anyone interested, please write Ken Rouw, C/- PO Witchcliffe, WA 6286.

We would like to provide a unique opportunity for a couple, group or commune to acquire an organic farm in a delightful setting. The farm is at Oakdale, 90 minutes from Sydney. It consists of 30¼ acres of rich land, an older style house with wide verandahs, fireplace, septic, phone and a large dam in which we swim and canoe.

We have planted over 250 fruit trees and vines of every variety. The land is 1800ft above sea level. In the past we have earned income by supplyiing organic vegetables as well as goats milk, cheese and dried comfrey and ointments. We are including an old tractor, near-new fridge and furniture, goats stalls, sheds, enclosures and a variety of wire, ladders, beehives and tools, etc.

Please ring Peter or Ruth Honzatke at Oakdale 59 6386 or write: Lot 2, New Jerusalem Road, Oakdale, NSW, 2570.



I have ten acres of land which I would like to sell to some earth-conscious people. It is gently sloping land, mostly cleared, with views of the water and Bruny Island over the Channel. It is about 30 miles out of Hobart in Gordan. I would like $8500 or a near offer for the land.

I'm also interested in any information on fasting.

Jamie Pendlebury, C/- GPO New Norfolk, Tasmania, 7450.

Wagon Pioneering Company has bought 900 acres of hilly country with a lake frontage within a few hours of Sydney or Canberra. The Company has been formed by people who left Sydney six months ago in search of the simple life, fresh air, peace and privacy of the bush.

We want to create a haven for craftsmen, organic gardeners and a centre for creative leisure. Ultimately the project is likely to include a permanent settlement, visitor accommodation, community facilities and a produce-marketing co-operative.

As a first step, the Company is erecting a large community building (health food restaurant and school, etc) and a caretaker's cottage. We are now seeking suitable settlers to take up 50 acre leases. If you are interested, please write with a few details about yourselves and your interests.

Two further matters may be of interest: 1. A small freehold building block in an old gold mining village adjacent to the project is for sale at a reasonable price; 2. It is proposed to set up a co-op to make materials from local timber, mud and stone for our buildings. We would like to hear from anyone with carpentry or building skills who are interested in a full-time, part-time or simply advisory role in this venture.

Write: Wagon Travel Pty Ltd, Lyndhurst, NSW 2741.

We need people interested in a co-operative community in Western Australia. Organic farming, arts, crafts and a peaceful, but hard-working country lifestyle is our aim. We have a very old house in the suburbs and all are welcome to visit. Let's create some discussion on the subject.

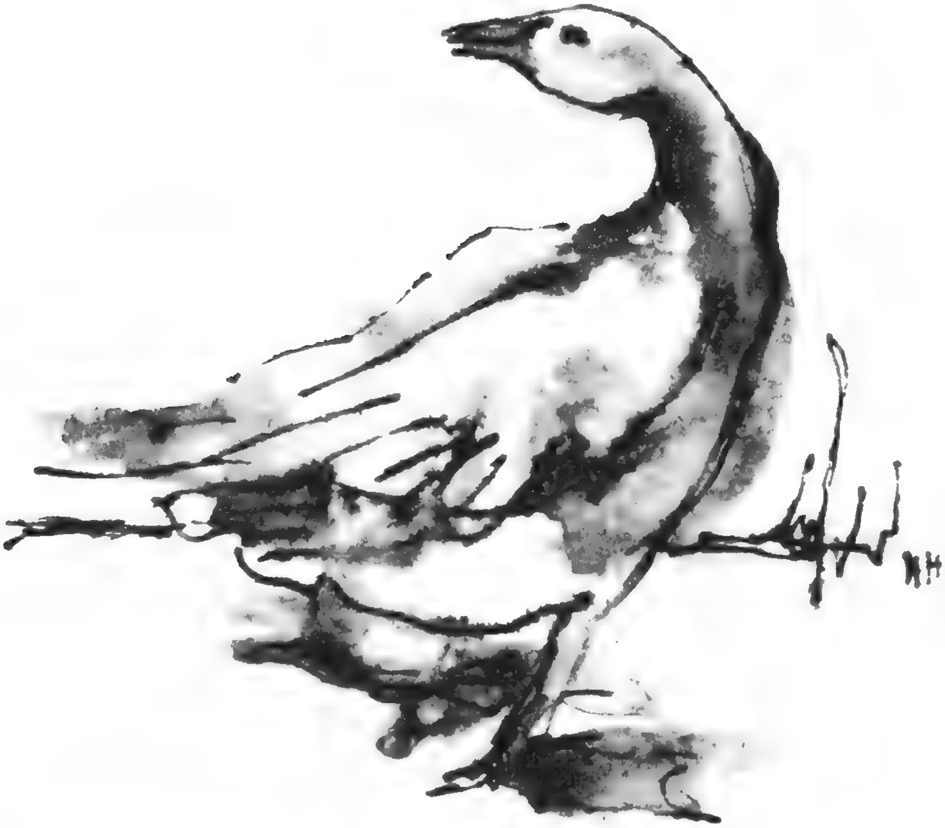
We are a working couple 22 and 28 years old, vegetarian health nuts who love chooks, goats and playing with soil, but we can't survive in the suburbs. Help!

Ray Boggon, 103 Hamilton Street, Bassendean, Perth, WA 6054.

Moora Moora Co-operative Community has bought 618 acres of bush and farm land at Mt Toole-be-wong, near Healesville, Victoria and is aiming at an eventual population of 100 to 150 people with diverse interests and backgrounds and a common concern to create an on-going learning community.

The community looks towards cluster, communal and individual buildings, full participation in all decisions, share concern for child-rearing, fruit and vegetable gardens, recreation and arts and crafts facilities, and protection of the environment. For further information, send a stamped envelope to PO Box 194, South Yarra, Victoria, 3141.

geese & guineas



BY DAVID HIGHAM

Though they are not as well-known as chooks or ducks, both geese and guinea fowl are well worth keeping. They are hardy, excellent foragers, don't need much food, provide meat and eggs — and are beautiful into the bargain.

GEESE:

The goose is almost a no-maintenance bird.

When there is plenty of grazing geese need no other food at all, although a bit of grain or bread keeps them friendly.

The breeding season is spring and summer, but geese are not much use if required for eggs. Although they are good eating, the most laid in a season is about 20-30 eggs.

As they spend most of their time on land, geese can be kept quite well with no swimming water, but enjoy a splash very much, even if only in a large basin or tub. The goose is a good mother and, provided water is available to wet her feathers, she will hatch and rear goslings well, accompanied by the very protective and jealous gander.

If the eggs are to be hatched under a hen, sprinkle with water once or twice a day, as they need moisture (like duck eggs). Hatching is in 30-31 days. The goslings are very hardy and grow rapidly. Their digestive system is adapted for a grass diet and they thrive on this and other green staff.

Geese have a great liking for the nuts in nut grass — they pull up the plant and eat the nut. They can do this more easily in soil which has been cultivated. One goose here had two cups full of nuts in the crop alone and more in the gizzard etc. So, perhaps they could be a means of controlling nut grass in an area which they could work over well.

Keep them out of the vegetable garden. They eat no animal life at all, but will soon get right into the plants. Unlike Guinea fowl, which fly and will roost in trees, geese don't fly much at all and will spend the night on the ground.

After keeping geese for a while, you will notice that they all have different characters, are very friendly and get along pretty well with ducks or fowls. They can, like the Guinea fowls, be very noisy at times, when there is a disturbance amongst the flock.

Once accustomed to each other, ganders will breed with many females, but each has his own special mate, with whom he spends his time, and guards her well when she is nesting.

Geese do best when they have free-range and access to grass and, when they have these conditions, are an excellent, no-worry means of transforming grass and weeds into good tucker, as well as being good friends to have around.

A point on ducks, which may interest readers: like the many varieties of domestic fowl which have been derived from the Red Jungle fowl, all the varieties of domestic ducks apart from the Muscovy, have come from the wild mallard of America.

If any of these are crossed with the Muscovy duck, the offspring are sterile, quick growing, and good table birds.

GUINEAS:

The Guinea Fowl has a long breeding season. Here in Queensland it extends from August to about May. Each hen lays 70-100 or more eggs a year, and they keep laying for quite a few years.

They are said to be monogamous in their native Africa, but here one cock can be run with three or four (some say up to eight) hens for fertile eggs.

The sexes are very hard to tell apart. About the only way is by the call: the female has a double-syllable 'come-back' call, which is never given by the male.

They will range widely, picking up most of their food as they move around. Guinea fowl cannot be kept penned like ordinary fowls. Though they will sometimes lay in these conditions, they must have free range.

Guinea fowl at one place I visited had been running freely and not fed at all. As a result they were very wary and unapproachable. When they

are used to being fed regularly, however, then they become fairly tame . . . one male here perches on my arm to be fed.

One disadvantage is that they will hide their nest (they do a good job of it too) and it can be pretty frustrating trying to find it. You only have to find one though, as all the hens lay in the one nest. What I do is feed them in a pen at night, so that they can be shut in if required. When let out the next day, the hens should head for the nest and can be followed.

The eggs are thick-shelled and pointed and taste just like chook eggs. If you want chickens, the best way seems to be to hatch eggs under a clucky chook in a small pen to keep out predators. The eggs hatch in 26-28 days.

The chickens are pretty little brown-striped things and are reared just like ordinary fowls.

Another thing about Guinea fowl — they will kick up a ruckus if disturbed, night or day, by strangers or unusual actions. They are therefore of some use as watch-dogs, though, if you have close neighbours, they mightn't be so happy.

pheasants in a pear tree

BY KRISTINA DURE

Pheasants have been a comparatively recent addition to our farm, but we have had a lot of pleasures through keeping them, and on the whole found it worthwhile.

We began with about 20 pheasants of both sexes, given to us by a friend in Melbourne who decided not to keep them any longer.

Rearing pheasants is by no means a simple job. Psychological factors are the main cause of this. It is not easy to domesticate them and after the females will not breed their own eggs in captivity.

Broody bantam hens are usually used to hatch the pheasant eggs as their eggs are nearly the same size, though the pheasant eggs are a light fawn colour. The problem comes with the pheasant chicks, which are extremely active and do not always obey the calls of the 'mother'. A couple of times we have found a somewhat disturbed mother settling down for the night, with one or two of her pheasant chicks missing.

Mostly, after searching, we found the hole in the fence through which they escaped and were able to recapture them. However, in the process of growing up many chicks were lost, mainly to hawks or cats, or from wandering off.

Our pheasants are kept in a quiet spot near the house in an enclosure built around an old pear tree, with plenty of space to allow them to fly into the tree. The chicks require a lot of protein in their diet, so they are given mashed hard-boiled eggs usually twice a day. Besides this, they will eat green fodder with their parents. The older birds also receive crushed wheat or oats with rice pollard and stale bread.

Pheasants are also fond of insects. If you are building a new cage for them it's a good idea to put plastic strips around the bottom in which insects may catch themselves. Keep enclosures reasonably low and if possible, include bushes and grass and other natural surroundings to make the pheasants feel 'at home'. This will greatly increase the possibility of them breeding their own eggs.

Pheasants are delicious to eat and their eggs contain extremely rich yolks, which can be used in omelettes.

After 12 years as editor, Wanda Garnsey has resigned from **Pottery in Australia.** The bi-annual continues to be one of the best-presented magazines we have in Australia.

The new editor is Margot Staples, and the new address for subscriptions is: 39 Mary Street, Longueville, NSW, 2066. The price remains good value at $3 yearly.

* * *

The New Zealand Potter, also published twice yearly, fills the same function as its Australian counterpart. Subscription is $2.20 from PO Box 12-162 Wellington North, New Zealand.

* * *

A craft village in the Adelaide Hills is the dream of eight craft 'freaks' who recently formed the **Kanmantoo Crafts Centre** (on the Adelaide-Melbourne highway). They also plan a co-op to buy food, materials and land. Write to Peter Dawson, Kanmantoo, SA. 5252 for more details.

* * *

Anteater Craft Shop at 207 Railway Road, Subiaco (that's Perth) is run by four spiny craftspeople originally from Melbourne.

Karen spins and knits raw wool and does stained glass work, Ross makes leather bags, belts and sandals, Bron creates Batik clothing, wall hangings, cushions and lamp shades and Gordon is the candle man. Open seven days a week.

* * *

John and Ann Stevens run **The Leather Shop,** located in a quaint old building in Warburton, Victoria. They make all kinds of leather goods, including belts and bags. John's photographs are also on view.

Getting it straight

BY JILL & TONY RAYNER

Just fifteen months ago, we moved onto Greenvalley Natural Farm. Our heads were full of thoughts on goats, horses, cows, chooks, organic gardening, you name it and we were thinking about it.

We thought we'd let you know what happened to those ideas, what happened to us, and what happened to Greenvalley Natural Farm during our first year as 'Earth People'.

First of all, we knew nothing about everything when we bought the land. Tony had never driven a nail, I had never so much as grown a radish and neither of us had any experience with animals except cats!

We managed to get the cottage clean, livable and relatively weatherproof during the months prior to our moving in. This involved buying tools, learning how to use them and where to use what. With the help of a carpenter friend, we ripped out all the inside walls, put up new ceilings, linings, put in new windows, glass, floor boards. One mistake we made was buying cheap tools. We had saws that buckled on us, chisels break and so on, and we went right out and bought them over again, this time good quality ones.

When we finally moved in, we spent a good many weeks just grinning at each other. We also met a lot of people with lots of ideas of their own (and other people's). It was generally a very confusing time with much messing about and nothing getting done. But it was a very important time on reflection. We had to get to know ourselves thoroughly before we could hope to survive on the fundamentals of nature. It was the time of great adjustment!

We spent many hours digging over the sod to start a garden patch, and cleared mountains of junk left over from the bushfires of 1967.

We also bought — and were given — animals. We had four goats on and off during the summer, a couple of geese, two ducks and a couple of cats and had to fight off a gift of a pair of turkeys. We also installed a beehive. We grew our first crop of cabbages, planted twenty-one fruit trees, and dug a duck pond.

To be brief, the geese ate the cabbages, the cats chased the ducks, the beehive swarmed, and we got not a pint of milk out of any of the goats. We did get a couple of dozen duck eggs but most of them were dropped in the pond, and we managed to salvage a cabbage or two and some broad beans from that first harvest.

The main problem was that we were not organised! We had no fences, no way of controlling the ducks at egg-laying time, no knowledge of goat management (hence we ended up with brummy goats) and not enough time to manage properly the many projects we had started. (We were still earning a part-time living). By winter all the animals were gone except the two cats and half the bees (who did give us five frames of honey), and we sat down firmly to decide how to develop the farm with some semblance of order.

We wanted to produce our own healthy food in a pleasing and natural environment but we did not want to become slaves to the soil, so to speak. It was important that we had enough free time from the chores to devote to other creative endeavours — music, writing, thinking, and just plain human communication. Also it would be ideal if we could manage each farm project to at least pay for itself, hopefully making a little profit to pay for expansion and maintenance.

Many oldtimers have said to us that it was not worth keeping chickens because, by the time you had bought the laying mash, growing mash and what-have-you, you might as well have gone and bought the eggs. Likewise a pint of milk. We did not agree with this. We just felt that it was wrong. Besides we were interested in quality as well as quantity.

We were determined to learn thoroughly about each project so that as little money, time and tears were lost as possible. We also became interested in the natural rearing of animals, as a flow-on from our interest in naturally grown vegetables and fruit. If it could be done for plants, surely it could be done for animals — natural feed, natural medicines and as a consequence, cheaper management (not to mention the better product).

We more-or-less decided on goats instead of a cow because of the type of land we have. Also, we like goats. We joined the Goat Society, which was one of the best things we ever did. Not only did we begin to learn about goat management, we were also in a position to note the different mistakes that members had made themselves in the past. We found the 'goat people' very helpful and very friendly. We learned that it is far less time-consuming to have your goats loose in a well-secured paddock instead of tethered. Besides, the goats were happier. We learned about the different breeds and how to care for goats eg, hoof clipping.

We decided to go in for a breed which is not very common in Tasmania — the Anglo Nubian. We were intrigued with the challenge — not to mention the beauty and character of the breed. By now we were really hooked on goats and instead of just having a couple of milk goats for ourselves, we planned to establish an Anglo Nubian goat stud at Greenvalley. But it would be a slow start. We bought two 3-week-old Nubian kids after a wait of six months. Sally and Mara are now 11 months old and are still 12 months away from their first mating. But we think it is worth the waiting. Meanwhile we get our milk by the gallon from the local cow dairy.

Our aim is to have seven or eight dairy goats (making hard cheese from the excess milk) running on the mountainside or rough pasture and bush behind the cottage, which will be split up into three or four paddocks for rotation. The buck, of course will have to be run separately. Apparently, the problem is not to keep him from the does, but the does from him!

With eggs at almost $1 a dozen, it was a hard decision not to buy any chooks until the garden was fenced. A fenced garden for us means an anti-goat fence and about $300. That is why it is still not fenced.

We had visions of using a draught horse for cultivating our six acres of flat arable land (the only flat land on the place) but soon found there was more to having a horse than feeding it hay and putting it in front of a plough once a year. A horse needs regular work or exercise to keep it fit and manageable. We did not have enough work for a horse and could not afford the luxury of keeping a pleasure animal. A horse was not for us. Why not a donkey?

GYPSY: The problem with donkeys is getting the photo before she comes right up for a nuzzle.

We did not know how feasible it was to use a donkey for ploughing or other work on a farm, and when we saw the article in EARTH GARDEN 4 by Katherine Tyson, we wrote to her about our idea. We soon learned that it was a very good idea, the only trouble being that donkeys were difficult to get. But we didn't mind, we got a lot of information from the Donkey Society and its Donkey Digest and settled down to wait for opportunity and money to show itself.

We were very lucky to find two donkey jennies (possibly both in foal) only forty miles away which we bought very cheaply. So we are now bringing them up to top condition and beginning their education (training) for the chores that lie ahead. We are hopefully looking forward to a happy foaling about Christmas time.

Donkeys respond marvellously to love and kindness, and their capacity for hauling and carrying is enormous. They can be very useful animals about a homestead, particularly if it is hilly! And the sheer joy of having a donkey companion goes without saying. We are also planning a donkey stud here, along with the goats. With good management we can utilise the whole of our rough and rocky 72 acres providing plenty of natural feed and good environment for both these animals.

Our interest in the natural rearing of animals brought us round to the herbs. The subject of herbs is a very absorbing one and, particularly on the medicinal side, requires a lifetime's study. If we were going to grow quantities of garlic, rue, sage, comfrey and so on, why not a herb nursery? So is the future born.

So here we are, approaching our second spring. Greenvalley is coming to life. Our farm will be a beautiful home for ourselves and our animals. We still work in the locality to earn a crust but we are taking things more slowly now, working steadily at erecting farm buildings (barn, dairy, honeyhouse, etc) and putting up fences as money comes in. We have all our sights set on two years hence when the farm will be paid off and our food production will be in full swing (including our young orchard). We are happy and confident that we will be able to make a living from Greenvalley doing what we want to do selling homestead animals and homestead produce.

If anyone is interested in the natural rearing of animals, do write to us. We may be able to help each other.

Greenvalley Natural Farm,
Crabtree, Tasmania, 7106.

When you eat, have above you the angel of air, and below you the angel of water. Breathe long and deeply at all your meals, that the angel of air may bless your repasts. And chew your food with your teeth, that it becomes water and that the angel of water turns it into blood in your body.

ESSENE GOSPEL, translated by Professor Edmond de Bordeaux Szekely.

Love your body is a recipe book of 'live' foods with vegan attitude, influenced spiritually by yoga and the Essene (Dead Sea) gospels. Viktoras Kulvinskas is a co-director of the Hippocrates Health Institute in Boston, Massachussets, USA, founded by the late Dr Ann Wigmore.

"We can treat ourselves with love and become more healthy and more beautiful," says Viktoras in the foreword. "Through right diet we can slim the body, rejuvenate it, make it youthful."

His book teaches how to sprout seeds of soybeans, alfalfa, fenugreek, sunflowers, lentils and mung beans and how to create an 'indoor survival garden' for growing seven day greens of wheat, buckwheat, millet, radish and sunflowers. These uncooked, organic foods provide blood-purifying chlorophyll and are rich in amino acids, enzymes and vitamins.

"On a diet of sprouts, indoor greens (buckwheat, wheat, sunflower) and kelp, says Vik, "you can supply all the body's nutritional needs for as little as 10 cents per day". Examples:

SOLARIZER

1oz wheatgrass juice
3oz organic carrot juice
Mix the juices. This is an excellent drink for a child. Give him a healthy start in the morning.

GERMINATED SALAD

1 cup sprouts
1 cup shredded carrots
1 handful watercress
3 cubed tomatoes
1 cup chopped celery
½ cup chopped dulse leaves

CHOW MEIN

1 cup mung sprouts
1 cup lentil sprouts
1 cup mushrooms
2 cups sliced onions
1 cup chopped celery
¼ cup soy oil
kelp
grated ginger root

Gently simmer mushrooms, sprouts and celery in a small amount of water for seven minutes. Remove from fire. Add oil and seasoning, Serve over millet or brown rice.

LOVE your body, live food recipes, Viktoras Kulvinskas, Mango Press, 211 Garden Street, Wethersfield, Connecticut, 06109, USA, 95 pp. Price $US2.50 posted.

Self-Sufficiency

Self-Sufficiency, The Science and Art of Producing and Preserving your own Food, John and Sally Seymour, Faber and Faber, London, 1973, 250 pp.

John and Sally Seymour believe that "a family with four children could live very well on five acres of good land, buying very little from outside, but only if they managed their affairs very carefully."

The authors of this English book should know what they are talking about. They have lived a life of almost complete self-sufficiency for the last 18 years. They tell their story lucidly, with humour and the insight which comes from tackling the many jobs involved in growing, raising and preparing all their own food.

The family's adventures are marvellously illustrated by Sally Seymour, an Australian. The Seymours believe animals have an integral place on the farm as much for their manure as for their meat or milk. It is not a book for vegans, though vegetarians will find many useful hints on growing food.

"What I am interested in," says John Seymour, "is **post**-industrial self-sufficiency: that of the person who has gone through the big-city-industrial way of life and who has advanced beyond it and wants to go on to something better."

Self-Sufficiency has chapter headings which are blunt and to the point, such as **Horse, Cow, Pig** and **Grass,** in the manner of William Cobbett, the author of **Cottage Economy (1822),** whom they greatly admire and often quote.

The subjects are covered thoroughly, though not exhaustively. This isn't a textbook, but rather a blueprint, which shows us how it works and the end result of that work in tangible form at the kitchen table.

John and Sally make cheese, cream and butter from the milk of their own cow ("a cow is the biggest tie in the world"), bread from their wheat ("there is no other bread in the world better than it") and beer from their barley (though the recipe seems complicated). They kill an ox each year for meat, raise pigs (fattened with the excess cow milk), run free-range fowls for eggs and meat and keep bees.

"Goats are creatures that I would never keep if I could possibly keep cows," says John Seymour and 16 lines is all the space he gives to these wonderful animals — perhaps the only serious discrepancy in the book in our opinion.

The Seymours agree with us, however, that there are no short cuts in growing vegetable crops, and recommend what Neil Douglas calls "the discipline of the pick and shovel".

"Some people will tell you that if you put a lot of compost on your land you won't have to hoe," they say. "This is rubbish — whatever you do you will have to hoe, unless you constantly douse your garden with toxic weed killers which will end up killing you in the end."

The chapters on Garden Crops and Storage of Vegetables are probably the most valuable of the whole work and worth the price alone.

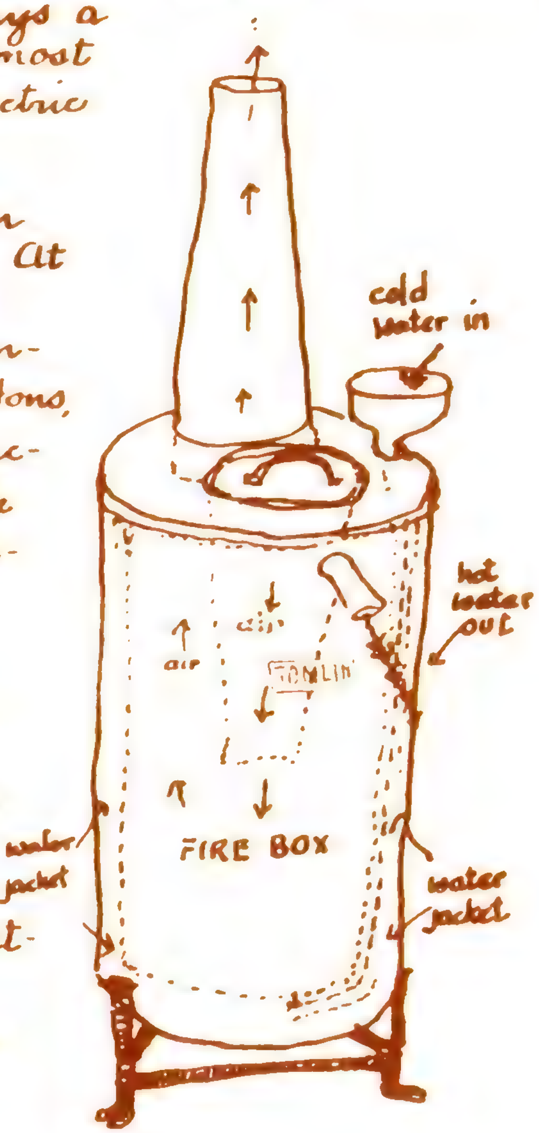
Our copy from Soil and Health Publications, South Warrandyte via Ringwood, Victoria 3134. Price $7.00 (hardback). Postage 50 cents.

Chip Bath-Heater.

This contraption should be familiar to many septuagenarians and even to a few younger bods who may have spent country holidays a couple of decades ago before the days of almost universal availability of portagas and electric power.

For the simple-lifer outside urban areas it still has much to recommend it. At no cost it provides piping hot water for all household purposes whilst getting rid of combustible waste of all kinds: newspapers, cartons, twigs, chips, scraps of wood & bark ... reducing them all to ash which can be used on the garden, in the chicken-run, in the earth-closet in places lacking septic systems or sewerage.

The design is simplicity itself. The very efficient down-draught fire box is surrounded by a water-jacket in which cold water fed in at the bottom is heated as it rises and emerges from the spout near the top. The temperature is regulated by the temperature and rate of flow of the input water from an adjacent tap, or hose, and by the heat of the fire.



A lid is provided to fit closely over the mouth of the down-draught cone: this cuts off the air supply extinguishing the fire almost instantaneously.

The more sophisticated models incorporating showers & connected by plumbing to a "proper" water-supply are now "discontinued lines", but the original simple one is still available through hardware shops in any fair-sized town. It is called Model A.

A "Kero-Heat Adaptor" to convert the device to burn kerosene is also available. The writer has found this highly unsatisfactory and even dangerous, a view shared by all others who have tried it and with whom she has come into contact.

Tomlins, the manufacturers will not supply the customer directly, only through retailers.

In Britain vegetable garden allotments have returned to popularity with the new wave of food shortages, inflation and austerity. You can rent five rods of land (about 12 square metres) for 75p to £1stg ($1.15 to $1.50) annually.

In the United States wartime Victory Gardens are being redug and renamed as peoples' gardens, while French citizens still have allotments separate from their homes for growing vegetables, herbs and flowers.

It is obvious that community gardens must come to Australia and one EG reader has been on the trail of just how this can be done. Why not take it up with your local council?

BY J. M. FITZPATRICK

It is evident that there are many people, who because of various commitments, just can't opt out of the rat-race, but who would dearly love to have the opportunity to be a little more self-sufficient in the matter of growing their own food.

These people obviously do not know that in NSW there is provision under the Local Govt Act No 41 1919 Part XX111A, Div 1 for the acquisition, by local councils, of land for small holdings. This section of the Act covers this matter fully. In brief the council may sell or **lease** an area of ground for any purpose of husbandry, including the keeping and breeding of livestock, poultry, bees and the growing of fruit, vegetables and the like.

The Council is required to advertise in the Press its intentions to provide small holdings within its area and to invite all interested persons to apply for consideration. It is also required to keep a "Register of Applicants for Small Holdings."

Division Four of the Act states that the council may provide tools, agricultural implements, appliances and/or livestock to any person in occupation of a small holding under this Act, upon such conditions of purchase or hire as it sees fit.

Could not a number of people in a Municipality or Shire join together and petition their council to make an area of ground available to them for vegetable growing for their own use?

I am sure communal vegetable gardens are very low on the priority of the average council. However, the provisions do exist within the Act and the idea would certainly be possible in some areas if sufficient pressure were brought to bear on our civic fathers.

With local elections coming up, it could be an interesting question to put to prospective councils.

BY PAULINE GREEN

I think there are as many methods of composting as cooks have food recipes.

I can't leave suitable material until there is enough for the compost heap. I have three cut-off galvanized iron tanks which gradually fill up as materials and energy come along.

With cows, hens and pigeons there's no shortage of suitable bacteria. At various times I have included pullets, a feral ginger cat (I have a commitment to native birds), fish innards and masses of crayfish shells.

Turns out much the same — lovely brown stuff full of earthworms, plus a few bones. Never bother turning heap. Just sieve any rough stuff out through ordinary wire netting on a frame at about 45 degree angle. Use compost heavily for big seeds or on beds left vacant to make weed control easier, though all of the compost doesn't get hot enough.

COMPOST

BY DOUG WALE

The easiest composting method is probably to chuck the stuff all over the garden. Second easiest, and more wholesome, is to dig latrine-style trenches, spade width and depth and as long as is convenient (say 1 metre). Put in all weeds, kitchen scraps etc. Before closing the trench chop any big stuff — cabbage stalks etc — and add poultry manure or blood and bone.

I personally use urea because my friend Lorenz, who taught me this system, made his vegetable garden by literally pounding sandstone into sand and then building fertility this way.

His view on organic farming was the heretical comment, "Ach, to a plant there is only one nitrogen," also "buy urea unless it is more than twice the cost of blood and bone."

BY HEATHER COGGER

If you can't keep ducks to eat your garden snails, then acquire, by hook or crook, two native snails, which, being carnivorous, eat the nasty garden snails and leave the tender shoots and seedlings alone.

I first introduced this animal into my snail-plagued garden accidentally, in some well-rotted cow manure brought home from the country.

The native snail is flatter, looks more like a small, dark-brown wheel than the nasty one. And do give some to your neighbours — and try to stop them using snail bait too.

The pig is a little four-legged fertilizer factory. MAO TSE-TUNG

Pigs for composting?

Relax, I don't mean that you should make pigs into compost. The idea is to let the pigs make the compost for you.

I kept pigs for many years, using mainly the **deep litter** principle. Basically, this is done by building the pigs a sty, with walls and a roof to keep them dry, and with an earthern floor. Pigs must have dirt to live.

If the floor is already firm and level, it is best to add, say six inches of soil, but including at least some of the upper loam. On top of this place about four to six inches of sawdust, wood shavings or leaves, or six to nine inches of straw or hay, or bedding of some sort.

Pigs are so easily satisfied — so long as they see you sweating and working on their behalf, they'll happily lie in the straw and grunt contentedly. Last of all you dump in the pigs.

The pigs promptly start turning all that bedding into compost.

To encourage their industry they should be fed at least some of their food on top of the bedding, where you should toss all your kitchen scraps. They eat everything except orange peel and mushrooms, but both of these will rot down quickly in any case.

They will eat oranges as soon as they learn what is inside the skin. The bedding should be kept dry, particularly in winter, with dry litter being added often. Restrict the pigs' water, not in quantity for drinking, but don't allow them to spill it or bath in it. In summer a few bucketsful tossed on to the litter doesn't hurt. They love it! But don't toss water on the pigs if it is too hot.

For deep litter, keeping the pigs should be restricted to the covered sty. All the manure and urine is mixed with the rest of the litter by the pigs and it turns into compost in the normal way.

As a by-product you have several fat porkers, or even baconers if they're big enough.

When feeding grain, it should either be crushed or fed on the floor. If they eat from a feeder, grain goes through pigs without being properly digested . . . and it will still grow! Also, a pig will eat, and indeed should have at least one pound of hay (lucerne, clover, oaten etc) per day. It is already incorporated into pig pellets as lucerne meal. They also need some form of animal protein and ground limestone.

An excellent pig-sty can be made from bales of hay or straw. Build them two bales thick and about four bales high. The roof should be raised a foot or more above the bales for ventilation and so you won't bump your head when shovelling out the compost. The roof can be made of bush timber and thatched with leaves.

Eventually the pigs eat the sty away, but it's all for the garden at any rate. A sty should last out several lots of pigs.

There should be no effluent from deep litter — rather important because the regulations regarding the keeping of pigs in Victoria have the most absurd provisions and virtually require daily washed concrete floors. But usually these apply only to more than five adult pigs.

Incidentally, fowls kept on deep litter also produce compost and eggs (see EG5). They too need dirt (what doesn't?) and they too should be fed on the floor.

Happy composting.

BY JOHN ALDERSON

I lay it down as a maxim, that, for a family to be happy, they must be well supplied with food and raiment.

To live well, to enjoy all things that make life pleasant, is the right of every man who consciously uses his strength judiciously and lawfully.

A good living, therefore, a competence, is the first thing to be desired and be sought after . . .

Economy means management, and nothing more; and it is generally applied to the affairs of a house and family, which affairs are an object of the greatest importance . . .

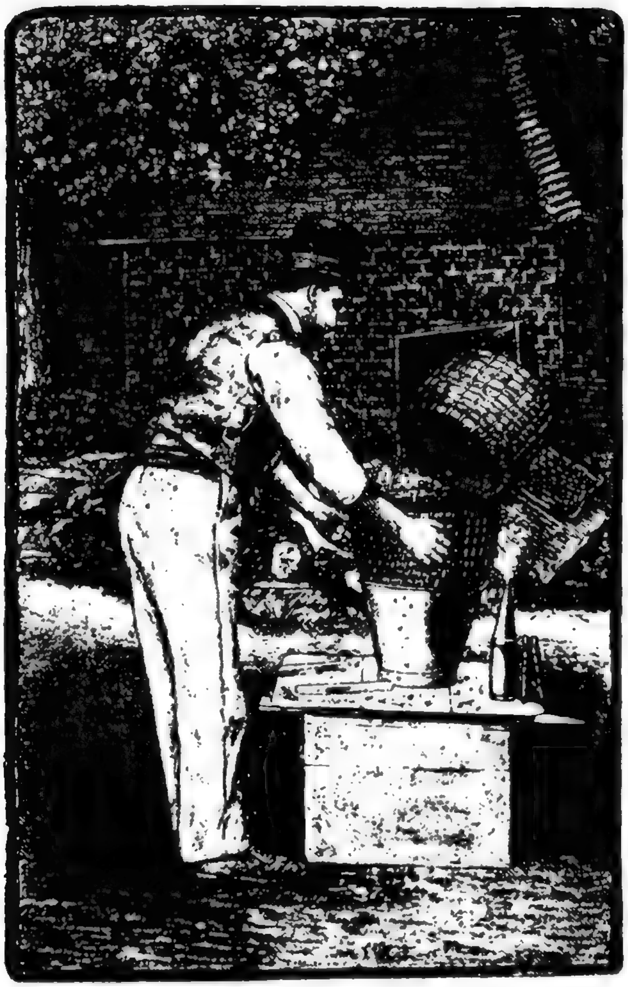
From: Cottage Economy, Containing Information relative to the brewing of BEER, keeping of COWS, PIGS, BEES, EWES, GOATS, POULTRY and RABBITS, and relative to other matters deemed useful in the conducting of the affairs of a Labourer's Family, William Cobbett, London, 1822, 207 pp.

William Cobbett was ploughboy, gardener and soldier, then clerk, tutor, journalist, farmer, seed-importer, publisher and newspaper proprietor, land owner and Member of Parliament.

He was a prolific writer of tracts and books, including the well-known Rural Rides. Cottage Economy was first published in six parts, at 3 pence per part.

It told the countryman how to keep a cow on ¼-acre and live well by making his own bread and brewing his own beer, warning against the evils of tea and potatoes, of which he wrote: "There is a tendency to bring English labourers down to the state of the Irish, whose mode of living, as to food, is but one remove from that of the pig, and of the ill-fed pig too".

The original book is now only found in rare collections, though a facsimile edition is planned by the US publisher, Augustus M. Kelly, which specialises in reprints of worthy books.



STARTING WITH BEES

What is the cost of getting started with beekeeping? We asked Mr Norman Redpath of the Beeline Apiaries in Melbourne to price a beginner's kit for us. The total for an 8-frame hive and other equipment, he reports, is $36.36 made up of:

Hive body, including migratory cover, bottom board, frames and frame foundation (8 frame size)	**$13.37**
Wire (for foundations)	**.57**
Nails	**38**
Bee smoker (galvanised tin)	**10.00**
Hive tool	**2.38**
Bee brush	**2.64**
Net veil	**1.50**
Gloves	**4.20**
Plastic queen excluder	**1.32**
Total minimum cost	**$36.36**

Mr Redpath points out that prices are apt to change rapidly with today's galloping inflation, so goods are sent at the price ruling on the day of delivery. Send cheque with order.

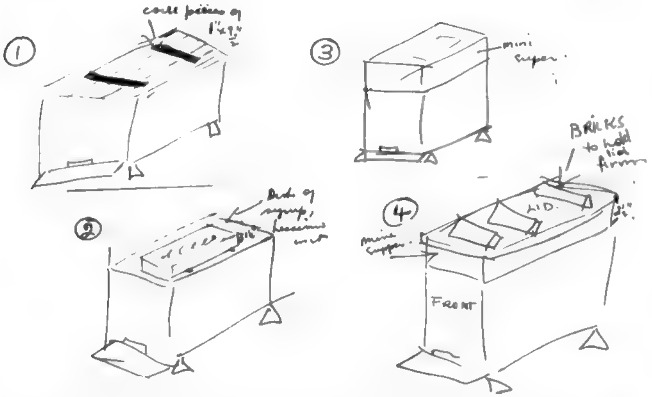
Equipment is sent freight forward by rail. The address: Beeline Apiaries, 285 Waverley Road, East Malvern, Victoria, 3145.

The cost of a queen bee and nucleus hive is added to this. (See EG4 for fuller details on keeping honeybees).

In cooler districts honey bees go into a restful state during winter, conserving their energies for the spring nectar flow. It is best to reduce the size of the hives by removing a super or two (for warmth), and you should leave enough natural store on the frames to get your bees through winter.

We don't really agree with the artificial feeding of bees with sugar syrup, but this may be necessary at times, such as the first week of settling in a new area, so it's just as well to know how to do it.

Peg Kinnish, a novice beekeeper, has picked up some hints on wintering the bees to pass on to EG readers.



In my experience you need about $100 in your pocket to deck yourself out independently and well (with two beehives), plus a suitable site. Read a book called Beekeeping in Victoria **first.** It is out of print, but I scrounged around and found one.

Find out who your district inspector is through the local Agriculture Department and he will advise you where you may safely buy disease-free bees.

From then on, learn the hard way — by experience and practice.

Our bees are going well now. I picked up a second-hand, old, honey extractor cheaply. Having fed one hive all this winter I certainly now have got my hand in.

To feed them I used one-and-one sugar-and-water syrup in a Tupperware cake container, not quite as big as the hive. This was placed on top of the frames on two small crosspieces, a mini-super on this and then the hive lid.

Into the container I placed little pieces of wood and then a folded sugar bag. Then I could put in a large saucepanful of syrup and none drowned — they sucked the stuff through the bag. I must admit that before I put the bag in they did drown.

Next year I will pack the bees down for the winter myself with plenty of sealed honey. This will save me feeding them.

Advice to beginning beekeepers like me — you need water. We have a dam with floating wooden boards in it.

If you have no natural water handy and easily obtained safely by your bees, I suggest a large container with hessian folded up in it, kept full of water so the hessian floats. This will insure that the bees can always get fresh water safely and easily near their hives. They use a **lot** of water. They'll **suck** it up!

Make sure the entrance of the hive is away from the worst winter weather. Tilt the hive to the front and level from side to side to keep it up out of the damp.

If placing two hives, face slightly away from each other to make different flight paths. Down here we plant to please the bees — we've just put in a dozen yellow box.

Make your beehives

BY JACK PETERSON

Three years ago bee-keeping was for me a hobby — five hives in the backyard of a suburban house.

Since then I have built up to commercial proportions — 200 hives — by constructing my own hives in spare time and with mainly salvaged materials.

The only equipment I found necessary for this was a home-made circular saw bench. If only a few hives are to be built a handsaw and a wood chisel would suffice. I built my own saw bench from scrap and angle iron, purchasing only the work head and the blade. The motor was rescued from an old washing machine.

The first problem is to obtain suitable timber for the hives. In my case this was packing cases discarded from local factories. The thickness of the timber should be in the range of 5/8-inch to 1 inch.

I decided at the start to make the hive bodies the standard length — 20 inches outside dimension. This was to suit the standard frame. The advantage here is that frames can then be freely interchanged between hives.

The width of the hive is optional to some extent, so long as the bottom brood box and the three 'supers' are the same width.

It is important to maintain the height constant at the standard 9½-inches for supers and 9 13/16th-ins for the bottom boxes to ensure the correct functioning of the bees within the hive. A 7/16th-inch by ¾-inch deep rebate (rabbet) is necessary on the top inside edge at each end to support the frames.

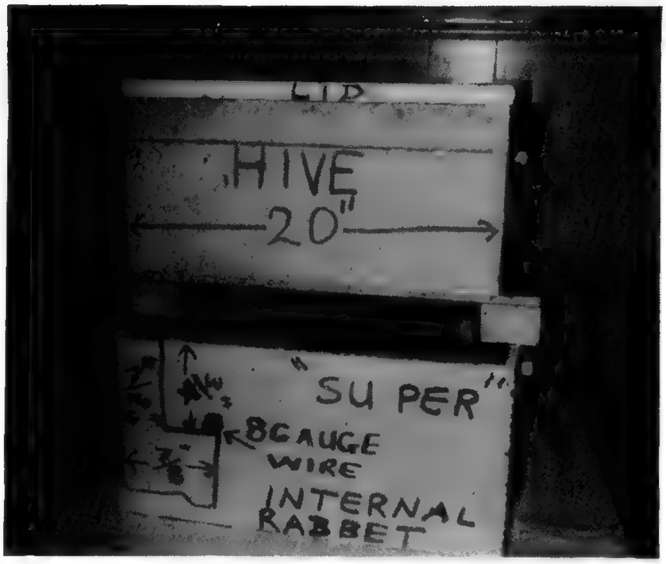
To prevent the bees 'glueing' the frames to the boxes, I fix a length of 8-gauge fencing wire along the rebate.

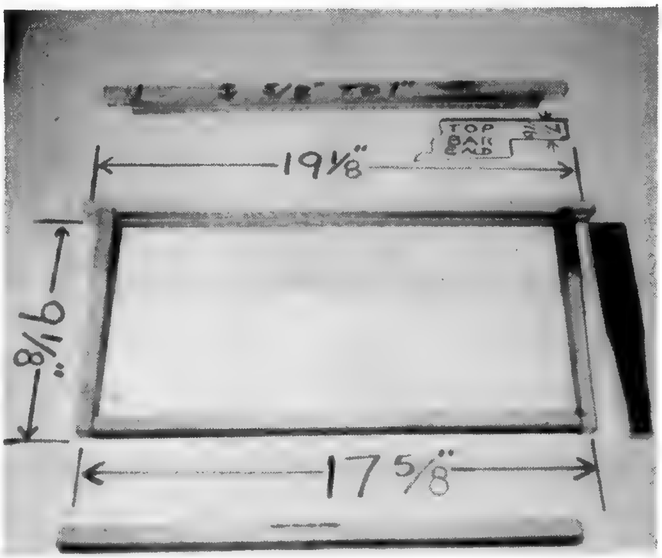
I use butt joints for the box construction, ensuring that all joins are well-glued with epoxy resin. Any waterproof glue will do here. This is a much simpler method than the traditional dovetail joint.

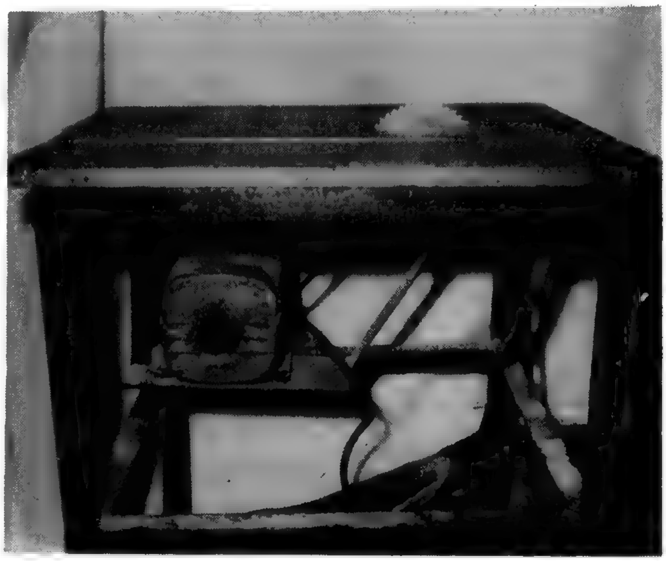
To prevent the breeding of wax moth within the hive all internal cavity cracks and holes on the boxes and the frames must be stopped within, using a filler.

The frames were built to the standard commercial outside dimensions, although the internal dimensions varied with the thickness of the timber available at the time.

Most of my hives are now situated at various places in Central Victoria, working mainly eucalyptus blossom. I hope to be joining my bees in this area as soon as I can find a suitable piece of land.

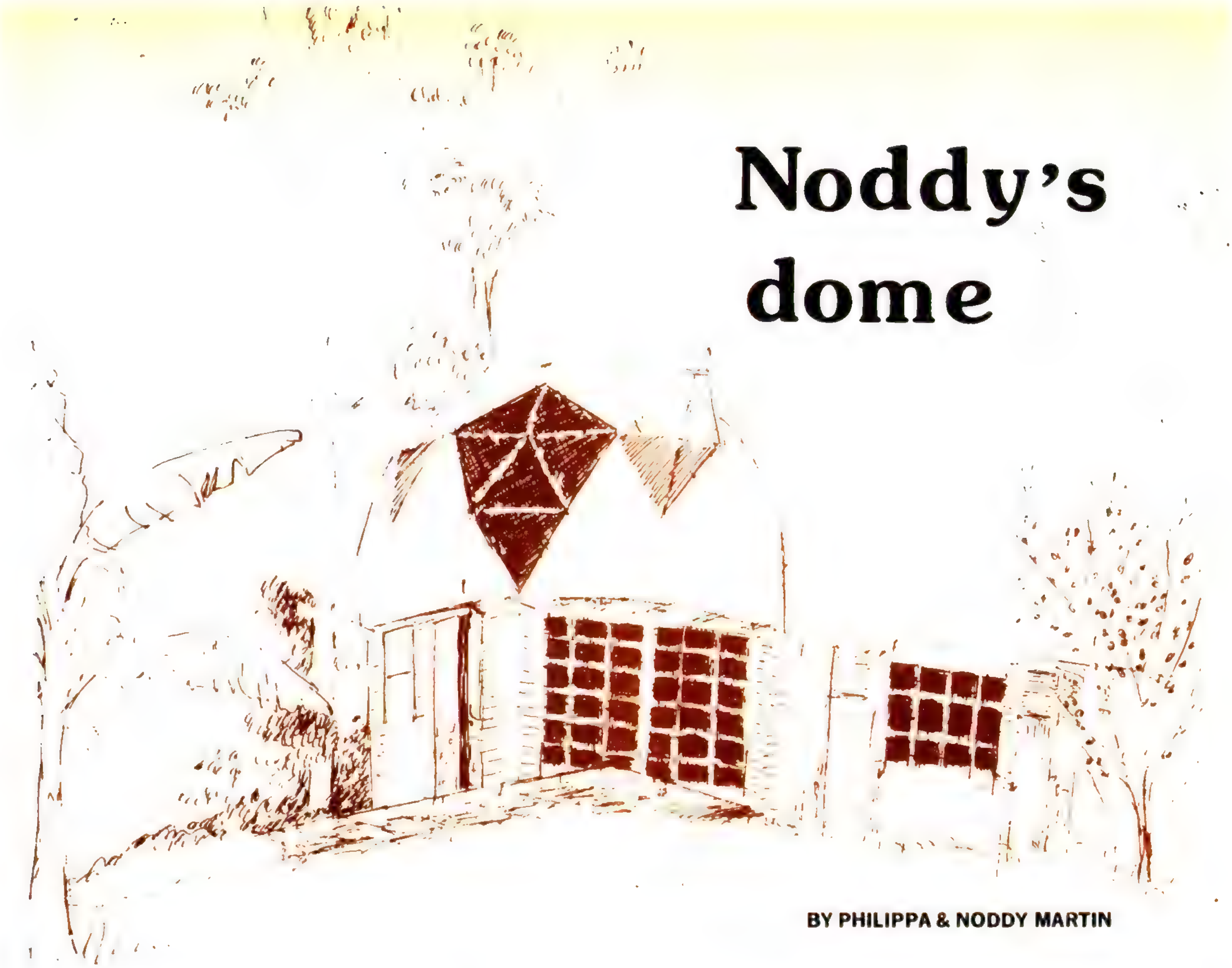






Hive at top — standard 14 inches wide, with wire closer. Super at bottom showing rabbet dimensions.
Frame (shown already wired) — dimensions shown are outside measurements.
'Rise and fall' saw bench. Table top: 24 x 24 inches. Blade: six inches. Motor: ½ horsepower, 1440 revs per minute, six inches 'A' section pulley. Workhead: 2 inches 'A' pulley.

Noddy's dome



BY PHILIPPA & NODDY MARTIN

The basic structure of our house consists of a square wooden platform. On top of this there is a hexagonal room built of old weatherboards, second-hand french doors and casement windows which we collected from demolition yards and the good old Brisbane Salvation Army depot (highly recommended for doors, windows, baths, sinks etc) and lined with flooring timber from a local mill.

The dome sits on top of this and is bolted down with five ½-inch bolts. It was constructed with 2 x 1½-inch struts and then skinned with galvanized iron, with each sheet overlapping by about one inch from the top down.

We built a stairway up to the dome which we enclosed underneath to form a walk-in pantry and to save space. Downstairs is the eating and cooking area and one triangle is partitioned off as a bathroom.

It is compact, full of corners and odd angles and during a storm feels like the captain's bridge on an old Spanish galleon, with the large casemented windows, timber lined walls and our kerosene lamps.

Upstairs in the dome, which is the living and sleeping area, is a different world — feels like part of the sky. It is lined with polystyrene foam which reflects light so that one candle at night gives sufficient light for reading.

Other things we think are worth mentioning and haven't been in EG so far are slow-combustion stoves and Alladin lamps. Although slow-combustion stoves cost more than other wood stoves, they are worth it because, as well as using less wood, and staying alight all night (if you are clever), they can be attached to a 30 or 40-gallon hot water heater and will heat this water to boiling point in about two hours.

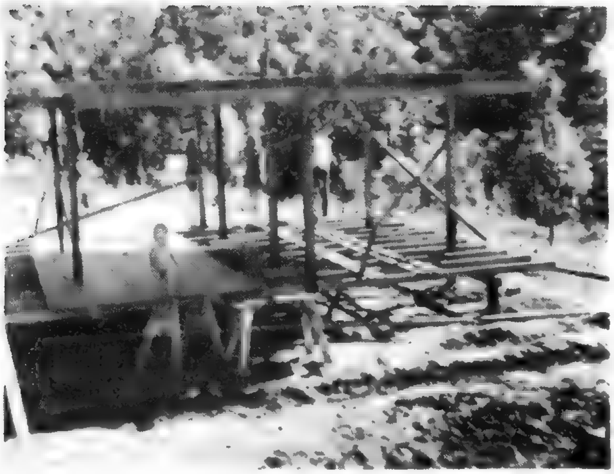
If we light ours every second or third day we have a constant supply of hot water for baths, showers and washing! As we have enough dead timber lying around our place for the next 100 years, we are self-sufficient as far as cooking and hot water goes.

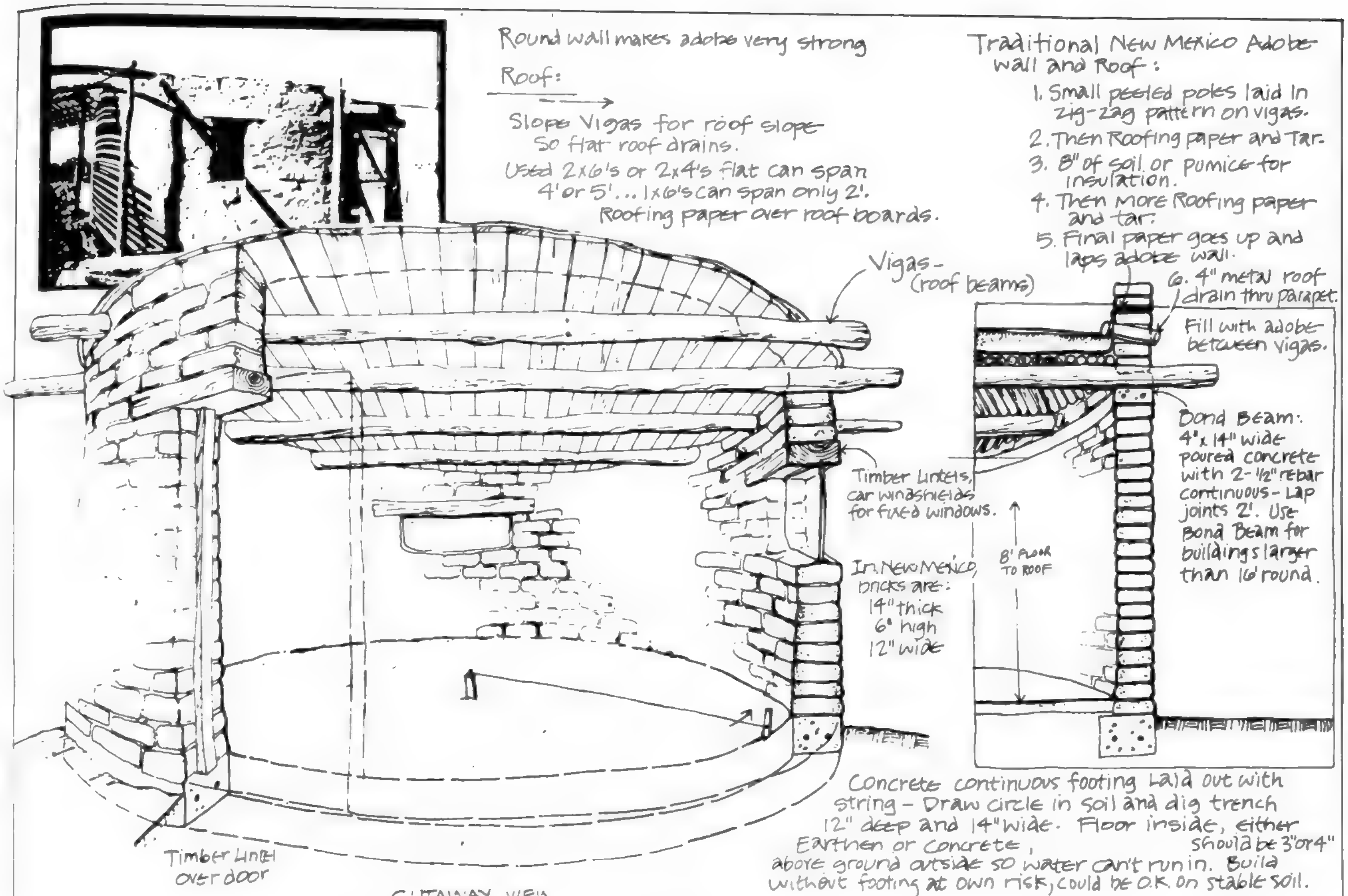
Alladin lamps are the best alternatives to electric light we've seen. They are a perfect combination of functional and aesthetic design — they look good and provide 100 watts of hassle-free (no pumping/no noise) light.

They can also be adjusted to give a dimmer light, which is impossible with pressure lamps. The Queensland agent is: Plastic Products, Curtin Avenue, Hamilton, Brisbane. This is the wholesale agent, so they give a 20 per cent discount to all customers.

One other thing. For anyone who is going to be relying on rain water (ie tank water), a gravity feed system is the alternative to pumping water, which is expensive and bothersome (unless you like tinkering with broken-down pumps).

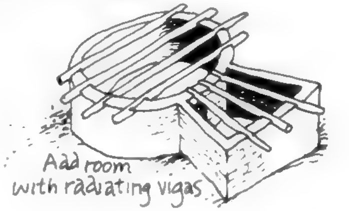
The best way to do this is to build a shed (poles plus a roof with guttering is all that's necessary) at a higher level than the house, with tanks attached to collect water from guttering which is then piped down to the house. This system provides us with a good pressure for showers.




Round wall makes adobe very strong
Roof:
Slope Vigas for roof slope so flat roof drains.
Used 2x6's or 2x4's flat can span 4' or 5'... 1x6's can span only 2'.
Roofing paper over roof boards.
Traditional New Mexico Adobe wall and Roof:
1. Small peeled poles laid in zig-zag pattern on vigas.
2. Then Roofing paper and Tar.
3. 8" of soil or pumice for insulation.
4. Then more Roofing paper and tar.
5. Final paper goes up and laps adobe wall.
6. 4" metal roof drain thru parapet.
Fill with adobe between vigas.
Vigas - (roof beams)
Bond Beam: 4" x 14" wide poured concrete with 2 - ½" rebar continuous - Lap joints 2'. Use Bond Beam for buildings larger than 16' round.
Timber Lintels, car windshields for fixed windows.
8' floor to roof
In New Mexico, bricks are: 14" thick 6" high 12" wide
Concrete continuous footing laid out with string - Draw circle in soil and dig trench 12" deep and 14" wide. Floor inside, either Earthen or Concrete, should be 3" or 4" above ground outside so water can't run in. Build without footing at own risk, could be O.K. on stable soil.
Timber Lintel over door

CUTAWAY VIEW

NEW MEXICO 16' ROUND **ADOBE**


Add room with radiating vigas

FROM: SHELTER, EDITED BY LLOYD KAHN, SHELTER PUBLICATIONS, BOLINAS, CALIFORNIA, 1973, 176 PAGES, LARGE FORMAT.

Our review copy from Whole Earth Bookstore, 81 Bourke Street, Melbourne, Victoria, 3000. Price $6, plus postage and handling 60 cents.

This book is about simple homes, natural materials and human resourcefulness. It is about discovery, hard work, the joys of self-sufficiency, and freedom.

In times past, people built their own homes, grew their own food, made their own clothes.

Building small to start with will give you basic experience. A small shed can be a place to live in or store things while you study the land and decide what to do next.

Building is hard work, costly and relatively permanent. Unlike a painter or potter, the builder cannot throw away an unsatisfactory result. There it stands, for all to see, for many years.

Use of human hands is essential, at least in single-house structures. Human energy is produced in a clean manner, compared to oil-burning machines.

Shelter is an anthology of hand-made houses. Hundreds of photos and drawings detail small houses, sheds, sod, adobe, mud, tents, tipis, hogans, tree houses, towers, barns, domes, wooden and traditional yurts, stone, timber, straw, caves, houseboats, gypsy wagons and trucks.

A dream book, craft book, survival resource. Hard to review. The range so wide, the vision so sweeping, the information so useful. Take a look for yourself, then build your house.

mudbricks yet again

BY JOHN J. ALDERSON

All the recipes for mudbricks mentioned so far in EARTH GARDEN differ considerably from the method used for over 100 years in our district, and which I use myself.

The local product will stand many years unprotected from the weather and has no faults that I can see except the amount of sweat used to make the bricks.

The earth used should be chosen carefully. The immediate topsoil must be removed — that's the dark stuff with the humus etc, in it. The few inches under this, a mixture of loam and clay, is what you use.

The best soil types have shot-like pieces of haemite in them. This is dug out and the lumps smashed. Smallish stones don't matter. It is then mixed thoroughly with water and made quite muddy. I like to cover it then with plastic sheeting, though old rags or hessian will do.

The plastic allows it to **cook,** and this helps the evenness of the mix. The surplus water will have been absorbed, indeed more may need to be added. It is easier to work it rather wet, so that the mud, when ready, has dried to the right consistency.

The mud must now be repeatedly worked, turned over and puddled and jellied with the shovel.

After a few workings the mud will cease being sticky and 'muddy' and eventually will take on an appearance somewhat like custard — which goes from a cloudy to a clear appearance when it is cooked. Mudbrick is the same.

Even more working should be given. I usually mix twice per day for a week and then make the bricks.

A mould is made the size of the bricks required. I use an 18 x 6 x 6 inch, which is large and heavy, but I find it convenient. This must be lined with sheet iron. Naturally it is left open top and bottom and must be strongly made.

The mud should be dry enough to stand up under its own weight, but not too dry. The mud is shovelled into the mould, tramped down firmly and levelled with the shovel. The edges may be bevelled, but this is not really essential.

The mould is then pulled off the brick and you start on the next one. Unless the weather is mild, the bricks should be covered with bag or plastic, but unless it turns very wet, the air should be allowed to circulate freely.

After a few days the bricks should be turned and, finally, stood on end. In very hot weather, however, I stack them without this, indeed when they are still far too wet to stand up without collapsing, but they are not crossed in stacking.

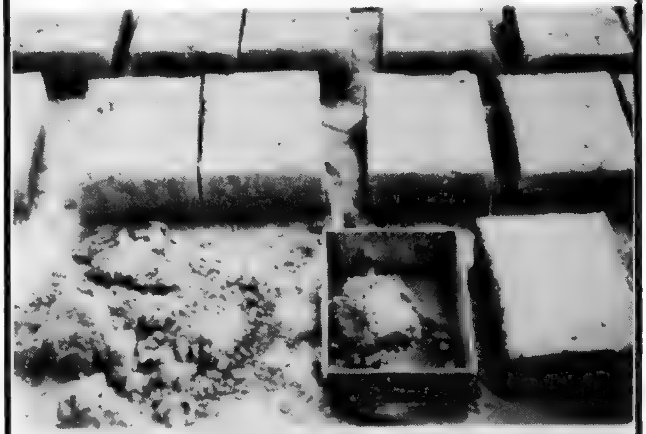
The same type of mud is used for mortar. I usually find that after a few days the mortar gets too hard for that purpose and it is turned into bricks. These bricks when dry should give a solid ring when struck with the fingers. If the sound is dead flat, they'll probably wash away.

I have built a big shed with such bricks and am building a house. I use a raft foundation of concrete and a concrete foundation wall on this one foot high and then concrete in the door and window jambs.

It should be realised that the most vulnerable part of a mudbrick wall is where it receives the splash from water hitting the ground. At least a two-foot overhang should be given to the roof. If possible plaster the walls. A good plaster, incidentally, can be made of equal parts of sand, clay and fresh cow-manure.

John J. Alderson, Havelock, Victoria, 3465.

single mould



Keith and Heather are a young couple with five acres of bush and a yen to build their own house. Using mudbricks, Keith's estimate is that he will pay less than $2500 for a solid 14-square house, including plumbing.

They both found that the quickest way of making mudbricks is with a single mould, made of thin metal as shown in the photo. Mud is shovelled into the mould, squashed into the corners by footpower, flattened off with a shovel and the mould is then removed.

"You can either spend 30 years paying off a house, or you can build your own in three or four months," says Keith.

Slate jigsaw

BY JOYCE & PETRUS HEYLIGERS

Some years ago we started extensions to our 70-year-old weatherboard house. They comprised a large 'communal' room, a small rear entrance area, and a bathroom plus toilet. The room was planned as the centre of domestic activities and to give direct access to the outdoor living area and the garden.

Because of the existing conditions we could do very little else than use a concrete slab as foundation. The floor had to stand hard use, because of our two children and their friends coming in with sandy shoes, and of the dogs and cats with their offspring.

After having considered carpet tiles, cork tiles, quarry tiles and even bricks, we decided on slate for a variety of reasons. Firstly, it was the cheapest material per unit area (in 1971 we paid $2.65 per square yard); it is impervious to water and household spills; it is easy to clean; and it is not slippery when wet.

With the dedicated help of a friend we did the laying ourselves. It needs a strong back and a lot of perseverance. We laid a total of 54 square yards and managed about two to three square yards a day.

Considerable time was spent in fitting the pieces together, just like a jigsaw puzzle, because we liked the joints to be as narrow as possible. Slate is very difficult to cut to shape and each piece has to be used as it comes.

We laid out the pieces 'dry' and shuffled them till we had satisfactorily covered a small area, say 1/3-square yard. Then we mixed mortar (1 part cement and 4 parts sand), put aside the slates, spread the mortar and put back the slates one by one, making sure to keep them level by checking with a spirit level against the previously laid pieces.

About one inch of mortar is needed under the slate to accommodate irregularities in the thickness of the slate and in the surface of the concrete base. The surface of the latter we had left with a rough finish to give a 'key' for the mortar.

In setting out the area to be 'slated' we first laid down a row of slates along the long sides of the room with the aid of a string and small bricklayer's spirit level. From these datum lines we worked our way across with taut string and a 3ft spirit level.

The spaces between the slates were later (after the mortar had absolutely set) filled with sloppy mortar to which a waterproofing compound (Silasec) was added, and also some black oxide to tone down the light colour of the mortar joint, which we found to give too strong a contrast with the dark-grey slate.

Overfill the joints, and when the mortar has slightly set, scrape the surplus away and clean the slate before the mortar dries (it is a hell of a job to do it after!), It happened quite regularly that some slates came loose from the mortar before the joints were filled in. These were refastened with a patent tile glue.

Altogether we laid 700 pieces of slate and, fortunately, we are very happy with the results. The floor looks good and somehow gives a feeling of a transition to the garden.

My uncle (typical Aussie) insists cow dung and clay, mixed in equal proportions give, when dry, a beautiful, hard, resistant flooring. After all, he was brought up on it! This is mixed in a pit, with the feet of as many people as possible to tramp and squash. It is spread to a suitable thickness over the floor (bare earth) and is smoothed and packed down.

— Frances Ingram.

If you've finally got to the bush and put up your dome, log cabin or mudbrick hut, don't be surpised to see a smiling guy coming over the hill wearing a beanie and a camera.

It will almost certainly be John Linblad, the 26-year-old American photographer, who has spent the past year ranging the backblocks of Australia on the trail of back-to-the-earthers.

Now John, formerly of Chicago and Honolulu, has gathered 4000 excellent colour photographs from which to choose in putting together his book on Alternative Australia. He's covered Australia from west to east and we last saw him heading off to Queensland.

The shots of the wood cabins on the page at the right are taken from John's visit to the 200-acre Belvedere community, near Bunbury, Western Australia.

TOP LEFT: Nearly completed, Dave's Indonesian-style house cost less than $100, and incorporates tree log columns, offcut lumber roofing and recycled fabric from last year's Festival of Perth.

TOP RIGHT: Bob, a Cornish painter, pauses outside another organic cottage at Belvedere. This one also used waste timber and was built by community members in two weeks at a cost of $50.

BOTTOM LEFT: Maurice, Marilyn and her daughter Pia, outside another cabin, made from timber found on the land and the other materials from demolition sites in Bunbury.

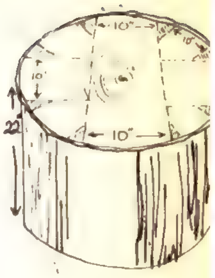
BOTTOM RIGHT: Interior of the house at left, shows simple bush pole and plank construction, homely atmosphere.

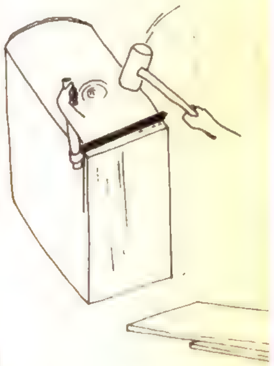
OVERLEAF: Photos of Graeme Robinson and friends at work cutting jarrah shingles for his log cabin at Gravel Hill, community near Manjimup, Western Australia, will also be used in John Lindblad's planned book.

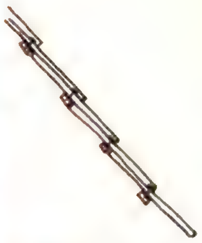
Graeme tells us the Manjimup area is ideally suited for the back-to-nature people with heavily-timbered land and a rainfall of 40-50 inches yearly (mainly in winter).

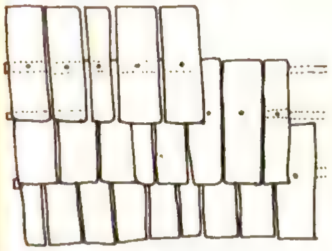
"My philosophy", says Graeme, "is to use the natural resources that your land offers you".

Log cabins in the West









jarra

shingles

BY GRAEME ROBINSON

This is an outline of how I made and then laid wooden shingles on my log cabin.

The trees used were Jarrah, which grow in this area (south-west of Western Australia). They were large — 40 feet of straight trunk and a diameter at chest height of at least four feet.

Although jarrah splits easily, the trees must be exceptionally straight-grained. This can be judged by looking at the bark.

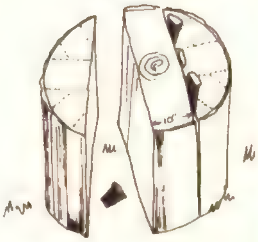
We felled the trees with a chain saw and cut them into 22-inch lengths. The desired shingles were to be 10-inches wide wherever possible, although many smaller ones were also used.

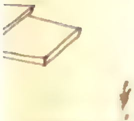
The 22-inch section was turned upright and this diagram drawn, indicating where the log would be split.

The log was then split, using a 7lb sledge hammer and a number of steel wedges.

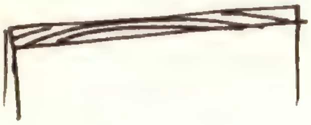
The froe was then used to split off the shingles. An attempt was made to keep the shingles as thin as possible. They averaged about ⅝-inch.

A large rubber mallet was used to drive the froe, as a steel hammer would have burred its back. The heart wood is useless, so when this was reached we started from the other side.



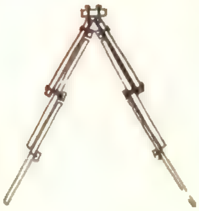


Note that each shingle is 'backed off' to give this pattern of growth rings:



SOME BRIEF NOTES:

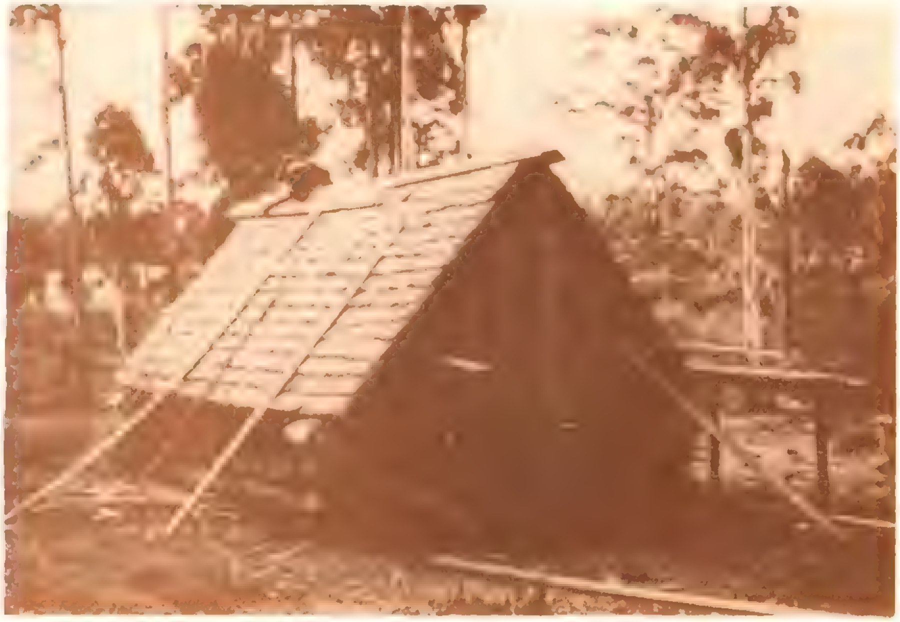
- A shingle roof must have a steep pitch.
- Only 50 per cent of any one shingle should be exposed.
- Shingle roofs may leak in early winter, but expand and soon become water-tight again.
- You could hardly use corrugated iron on a log cabin!



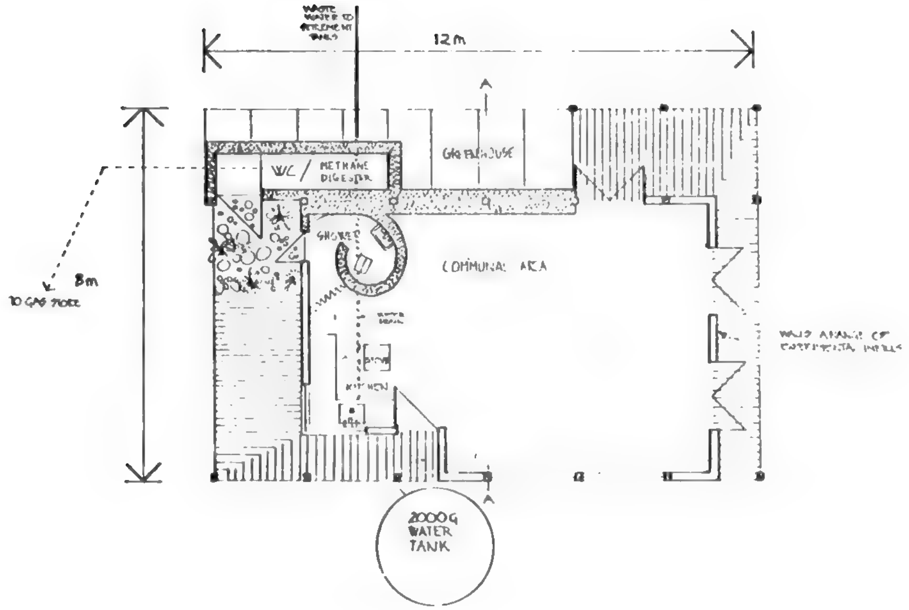
Shingles were trimmed with a carpenter's axe (small broad axe, about 2lb) to ensure a close fit and to remove bulges. About 400 shingles a day seemed to be a reasonable effort. No attempt was made to season the shingles, and no ill-effects resulted.

Before laying the shingles, horizontal battens were laid 11 inches apart over the roof. Each layer covered half of the previous layer and each gap was covered by the next layer. No two gaps occurred over one another. Each shingle was attached by one nail. Holes were drilled to prevent splitting.

Shingles are laid from the bottom row first. We found that we had to perch on the battens and then lean forwards and downwards. To seal the top we laid large planks (12 x 1½ inches) along the ridge on both sides with a 6 inch wide batten sitting flatly on top.



THE AUTONOMOUS HOUSE



BY PATRICK HOWDEN, ECO-TECH WORKSHOP

A new on-campus workshop and alternative data bank called the Eco-Tech Workshop has been established at Sydney University.

It is free and a haven for students, staff, inventors and serious ecology researchers to expand in their desired low-key technology fields.

Though still struggling, and with a zero budget, we have established harvestable relationships with such groups as the Inventors' Association of Australia, Electrical Vehicle Association, a ladies' tech group, Sydney Technical College for the use of their machine tools, Intermediate Technology Development Group (involved in simple devices and ideas for developing countries) and the Architecture Faculty for assistance in building a campus autonomous house disconnected from food supplies and utilities.

From an on-site US/UK survey we find only Great Britain with truly autonomous house projects (are there any others?). Our state-of-the-art designs for solving the immense number of cross-coupled discipline problems are often quite interesting, especially with energy conversion and storage.

We are especially looking at the fermentation or pyrolysis of fibrous lignin and scum, left over from Methane Digesters, into alcohol fuel. An interesting expanding metal engine we developed for the house uses low grade heat and can pump water using waste heat or the heat in the water itself (this was on a BBC programme).

By setting up a NEEDS/RESOURCES chart of energy/water/food needs, and resources of methane/wind/rain/sun/sewerage per day per person we have been able to determine most major and standby parameters of the house. The water cycle and recycle appears the most deterministic parameter. In construction we will employ trash technology and intensive value analysis wherever possible.

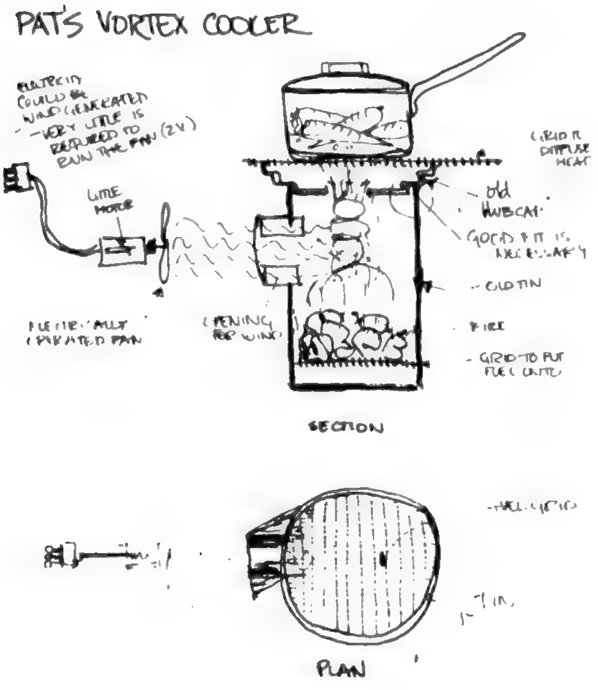
Incidentally, I feel instinctively that the greatest contributions we can make are in the general fields of energy conversion, universal transportation, autonomous houses, organic gardening and human relations.

Along these lines — apart from more cerebral pursuits — here is a sample of our design efforts:

- A commuter's or hitch-hiker's briefcase-size bike with 8-inch wheels and three gears.
- Vertical air-turbine. Needs no tower or external supporting structure. Has a single shaft and attic-mounted alternator. We are experimenting with air turbine sailing boats and barges, possibly jet hydrofoil catamarans.
- Electronic methods of battery charging at low windspeeds is a possibility.
- A vortex smokeless stove made from pottery or jam tins, which burns anything from screwed-up paper rubbish to damp leaves and wood, looks like a winner. A small fan, possibly run from a falling weight, is the secret of this mini-hurricane. No more effort to start than a gas stove.
- We are reviewing all forms of energy conversion and storage, including flywheels, thermal battery, liquid piston engines, salt water concentration cells and contracting rope engines.
- Less likely to be successful is a vacuum airship — who knows?

Finally, if you are up Katoomba way, try visiting the Falls House Community, at 1 Peckmans Road. You will always be welcome there and at the Eco-Tech Workshop. Come and exchange your ideas. If you have left-over tools and materials we would really appreciate access to them.

Eco-Tech Workshop, Box 146, Wentworth Building, City Road, Sydney University, Darlington, NSW, 2006. Workshop at 162 City Road.



Milan Posavec, Melbourne's magic miller, is expanding and has added another pair of granite millstones to fulfil the heavy demand for his stoneground wholewheat meal. Buy from him at Railway Road, Epping, Victoria.

He is seeking fresh supplies of organic wheat and rye and will pay top prices and would like to hear from farmers in Victoria. Those near Horsham, says Milan, should contact Mr B. E. Moreton at Stawell, telephone Callawoulda 3.

Jack Meechin, editor of New Zealand's "Soil & Health" journal, has moved to a smaller section and is busy preparing a new vegetable garden.

"I brought three trailer loads of mature compost with me and already have lettuce half grown and cabbage, cauliflower and silver beet nearly ready to transplant," he told us recently.

The new address, which applies to those seeking a subscription to the journal issued six times yearly at $2.00 NZ, is: 38 Arran Crescent, Linwood, Christchurch 6, New Zealand.

The Conservation Farming Society of Western Australia is a unique group which is bringing together clubs which plan to conserve much of the natural bush areas while still husbanding the land.

Annual subscription is $2.00 a year. Send to the Treasurer, Mr J. A. Kane, 13 Kemp Road, Mt Pleasant, WA 6153.

organic outlook

John and Yvonne Macgrath of Lowan Whole Foods, 58 Nelson Street, Nhill in western Victoria, have set up an organic flour mill which utilises a 3ft baltic stone, imported from Norway.

They are producing 100 per cent whole grain wheat flour, rye flour, barley flour, fine and coarse wheat for breakfast cereal and rolled wheat and oats. They are also looking for supplies of organically grown maize or corn, soybeans and millet.

Good Food, Gluten Free, Hilda Cherry Hills, Henry Doubleday Research Association, Bocking, 175 pp. Available at $2.20, posted from: HDRA, Greggs Road, Kurrajong, NSW 2758.

A gluten free diet is essential for people with coeliac disease and of benefit to sufferers of multiple sclerosis, autism and rheumatoid arthritis. Lawrence D. Hills, founder of The Henry Doubleday Research Association and a coeliac, is Mrs Hills' husband.

The book outlines the aims and methods of a gluten-free diet with dozens of recipes to turn this unwanted restriction into some adventurous, tasty and health-giving cookery.

Gas Power 3:

gas ~ fertilizer ~ protein

A waste disposal system which converts piggery effluent into methane gas, fertilizer and protein feed supplement is now available in portable kit form.

The Sanamatic system, developed by John L. Coulthard, won the John Lysaght Inventors' Award of $5000 in 1972.

John Coulthard, Australia's pioneer in bio-gas extraction from animal manure, has been involved in the study of waste recycling since 1952 when he delivered a lecture on "profits from waste" at an African University.

He saw the potential of bio-gas as far back as 1947 at a meeting of European scientists in Germany. "The thought was in my mind that here was a basic natural process which ingenuity in design and microbiology could considerably improve," he told us.

Later he attended a conference on fossil fuels in Britain, which pointed up an energy calamity in the years to come. "It was therefore a sensible thing to be involved in," says John Coulthard, "and it wasn't difficult to see that a much improved process would be of value — later on — to mankind."

His belief was reinforced when more than 1000 people came to see his prototype plant at Pakenham, Victoria, after a series of articles he wrote for The Pig Farmer in 1967 titled "The Bacterial Powerhouse".

"Today the world-wide concern over pollution, the ever-mounting costs of commercial fertilizers and the ogre of disappearing energy in an economy geared to power have made poultry, pig and cattle farmers take a second look at the bio-gas-fertilizer-protein process," he wrote in the same journal recently.

Since 1967 John Coulthard has been at work with changes in tank construction and improved bio-chemistry and now claims that the system he has developed is years ahead of copiers and cheaper than anything available in the world today on a cost/return basis.

The systems are on a commercial scale — the prize-winning unit for example has a 27,000-gallon digester which may handle the wastes of a 200-sow intensive piggery.

It produces the equivalent of 60 gallons of 110 octane petrol per day in methane gas, equivalent to an energy value of $10,950 per year. Its cost, with all automatic equipment and controls, is lower than that figure.

Sanamatic Tanks Pty Ltd systems begin with a portable model which will take a dry weight of 1000lbs per day, producing 4000 cubic feet of bio-gas (rated at 700 British Thermal Units per cubic foot of gas) per day, 185lbs of protein and 4500lbs of liquid fertilizer.

Capacity of this smaller model is 500 gallons of 20 per cent solids or 1000lbs of dry manure or 2000lbs of fresh manure daily.

The protein feed returned has a moisture content of 12 per cent and an amino acid content four times that of the waste — comparing favourably with soybean and cotton seed meal.

Liquid fertilizer content is high in ammonium bicarbonate and has a pH of 6.8 to 7 and requires no lime alkaliser.

The gas energy value, estimated conservatively, is four cubic ft per lb of dry matter input or two cubic ft per lb of animal feed. Every 300 cubic ft of semi-purified gas is equal to one gallon of 110 octane petrol. John Coulthard's estimates are cautious and in keeping with his belief that foreign makers of vehicle gas converters have exaggerated bio-gas yields.

This automated unit currently costs about $5700 including installation. It consists of 3000 gallon mixing and 3000 gallon fertilizer tanks, heat exchanger, compressor and gas holder. Mixing equipment and pump are optional.

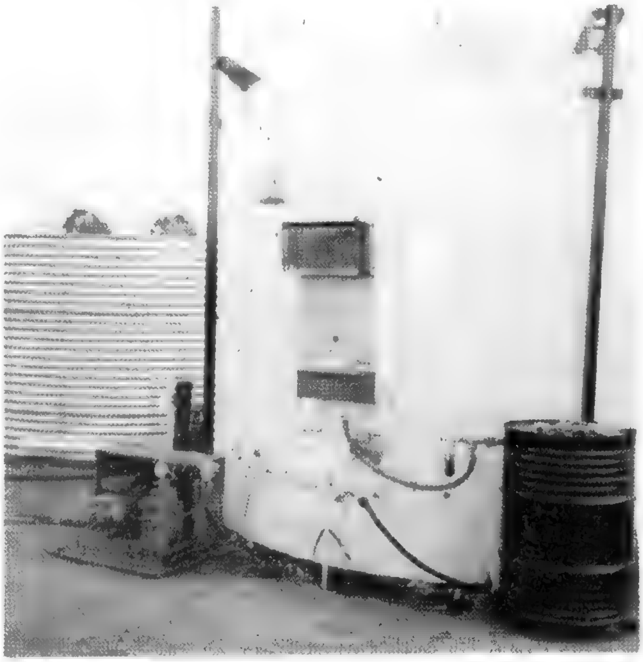
The development of these large-scale methane digesters may pave the way for a wider acceptance of the simple natural processes which could help solve the current problems of energy shortages, rising prices and environmental demands.

John Coulthard is already considering manufacturing a smaller kit version of the Sanamatic system capable of handling the equivalent of 500lbs of dry matter per day.

The cost of converting existing gas appliances to run on bio-gas is low. Tractor, truck and stationary engines can be easily converted to use the compressed bio-gas (see Gas Power articles in EG 8 & 9).

Says John Coulthard: "The plants are designed to pay themselves off in terms of fuel energy, fertilizer and protein in 1½ to two years for a 5000 gallon plant."

If you wish to attend a field day to watch the 5000 gallon half-ton a day unit in action at Bendigo or if you would like further information, send a stamped envelope to: Sanamatic Tanks Pty Ltd, Box 119, Bendigo, Victoria 3550.



Sanamatic 5000 gallon unit: automatic heat exchanger with gas compressor at left and gas purifier at right. The compressor is triggered by the rise and fall of the gas holder mounted atop the digester.

How to Convert your Auto to Propane, Jerry Friedberg, Arrakis Volkswagen, 1974 (fourth edition), 15 pp. From: PO Box 531, Point Arena, California 95468, USA. $US2.00 post paid.

Jerry Friedberg calls this little booklet "A manual of step-by-step procedures for the complete idiot." The complete idiot he defines as "someone who has no experience with auto mechanics, but who can handle an electric drill and wrench."

The manual tells you how to convert a Volkswagen or any other type of vehicle from petrol to LP gas power, using commercial converters and equipment or Friedberg's own **"Jerry Kit"** outfit.

The kit for VW conversion costs $US65.00 (add $US5.00 for extra postage to Australia) and is made up of converter (Impco unit), spud-in carburettor jet, hoses and fittings in pre-assembled form. You provide a fuel tank. Kits for other vehicles: under 150 hp — $US70.00, over 150 hp — $US80.00.

> Our VW bus and Chevrolet pick-up have now travelled a combined total of over 20,000 miles on LP (liquid propane) and it works. New York-Maine-Tennessee-Florida-Arkansas-Texas-Utah-California, and it works. Results: lower operating and maintenance costs, clean burning fuel, 70 per cent less air pollution, and much longer engine life.

CAA AND METHANE

Dear Irene and Keith,

I was very interested to find an article on George Chan's methane digester in amongst the series on gas power in EG8. Community Aid Abroad had quite a bit to do with the development of Dr Chan's balanced eco-system design. The idea of integrated development of the energy, food and people resources of an area is what CAA is all about.

We originally helped George Chan set up an experimental pig farm/digester complex at the Makana Vocational Centre in Bomana near Port Moresby, Papua New Guinea. Later we provided his living expenses while he toured Indonesia investigating the possibility of establishing digesters there and training personnel in the construction and maintenance of the system.

At present, we are funding the establishment of two more digester systems, one at Darul Falah, Bogor, Indonesia and the other in co-operation with Dr Denny Thong, the director of the General Hospital at Bangli, Indonesia.

If any EARTH GARDEN readers are interested, Community Aid Abroad has fairly complete details of Dr Chan's system which we will send in return for 50 cents to cover printing and postage.

Peace, love and happiness to all.

Rob Pardy, Field Officer, CAA, 75 Brunswick Street, Fitzroy, Victoria, 3065.

Mother's Methane Package, The Mother Earth News, PO Box 70, Hendersonville, North Carolina 28739, USA. Price $US9.00 post paid.

This special offer from The Mother Earth News includes Ram Bux Singh's manual, **Bio-Gas Plant,** and **Methane Digesters** from the New Alchemy Institute (see EG8), plus TMEN 12 & 8 covering Singh's methods, TMEN 23 interview with L. John Fry, a poster and plans for building a 55-gallon drum methane generator.

banana gas!

Ian Hamey with the experimental methane digester (at right).

We grow bananas and dry them. Every week we have over one ton of waste skins from the factory.

Over the past few months I have been experimenting with anaerobic digestion to obtain methane from the waste skins. As a digester I used an old 13-gallon oil drum.

If we are successful with our experiments, we intend to install a large digester to handle the entire waste from the factory. I have found that it is more difficult to obtain methane from vegetable matter than manure.

I found the CSIRO to be most helpful and I would strongly urge anyone setting up a digester using vegetable matter to contact Dr Alan Lane, Division of Food Research, PO Box 52, North Ryde, NSW, 2113.

In the next few months I should know a good deal more about our project — one has to wait for the correct level of bacteria to build up. However, if we are successful, the methane will be used to help dry the bananas.

Best wishes, Ian L. Hamey, Hamey & Co, Coffs Harbour, NSW.

* * *

Hamey's dried bananas are available in many health food stores and are made from naturally ripened bananas, with no sugar, colouring, or preserving agents added. Dried bananas were a food in China more than 1000 years ago. They can be used to make pies, cakes, banana honey loaf and other sweets.

BY ROBERT FATCHEN

Just a couple of hints on working horses. Firstly, now is the time to acquire a horse as prices are soaring.

I am interested in Clydesdales for work and breeding purposes. On a farm you only need to sell a couple of foals a year to pay for rates and other necessities. I found a lot of older blokes at the Royal Shows very helpful, and you can learn a lot about what to look for by just hanging around the stables.

I bought my two horses from Mr George Cox of the Valmont Clydesdale Stud, Culgoa, Victoria. Generally, Victoria has the best Clydesdales and the most in number. Mr Cox was most helpful to me in finding me the type of horse I wanted.

The Commonwealth Clydesdale Horse Society of the Show Grounds, Epsom Road, Ascot Vale, Victoria, 3032, can also be a good source of information. I found the local dairyman was only to eager to help me find a place to buy harnesses and the like. He showed me how all the pieces fit together and was generally very helpful. Milkmen's horses are generally Clydesdale cross for speed as well as strength. Our local guy just sold two to the knackery for $500 each.

The horses themselves are just so good. They are teaching me much. Peace in balance.

We are on a small farm, working towards a modified form of self-sufficiency. The rains have set us back a little, but also taught us patience. In the spring we hope to open Thalaba Pottery to provide us each with a small income.

But what we'd like to make known through EARTH GARDEN is that we are breeding a good strain of gentle house cows for gentle people, perhaps newly into cows. They are mostly Jerseys, but also Jersey-Friesan crosses.

The Jerseys give a medium yield with high cream content (which makes lovely butter). The JF crosses have a higher yield, but lower cream content.

We run the calf on the cow, which means we're not absolutely tied to the farm, and need not milk each day, although the cows do appreciate a regular pattern and do better under it.

Kelly Keene, Thalaba Farm, Marshdale, via Dungog, NSW, 2420.

In setting up my horse-and-wagon (story EG9) I received a beautiful horse, advice, encouragement and hospitality from Les Murphy, of Red Bluff, via Huon, via Wodonga, Victoria.

I give his full postal address here, because he's into breeding draught horses and has lots of old harness . . . a good man to contact if you're interested in heavy horses.

Love, Phil O'Carroll.

Katherine Tyson, who wrote about keeping donkeys, and her own jenny, Emma in EG4 is now editor of **Donkey Digest,** the only Australian magazine devoted entirely to donkeys.

Readers will be pleased to hear that Emma has given birth to "a fine snow-white (colour unexpected!) foal". Says Katherine: "As Emma is chocolate brown and the father light grey, a snow-white foal was a great surprise. Emma is very proud and quite aggressive, even towards us".

Donkey Digest, the journal of the Australian and New Zealand Donkey Breed Society, is issued quarterly at $2 per year, or 50 cents per copy. Note the new address: The Editor, PO Forth, Tasmania, 7310.

* * *

Australian Donkeys, Ann Walker, Humphrey & Formula Press, Melbourne, 1974, 100 pp. Price $4.95 from Box 102, Bayswater, Victoria, 3153. (Postage 50c).

This book is about donkeys in Australia, which makes it the only one of its kind. Ann Walker was a founder member of the Australian and New Zealand Donkey Breed Society, which has already done so much for the well-being of donkeys. She runs her own stud in Victoria and often judges at Donkey shows.

Australian Donkeys tells something of the history of donkeys, their care and management and how to turn the wild bush donkey (still classed as 'vermin' in Western Australia) into a docile and tractable mount.

Would you believe a donkey in surburban Balmain? That's Merry McDonald, who keeps her donkey Abdul on a large block of land while she has to stay in Sydney. We had quite a pleasant surprise when they both visited us at home one day.

Australian Natural History, published quarterly by The Australian Museum, Sydney, 38 pp. Annual Subscription $2.50 posted. Write: PO Box 285, Sydney South, NSW, 2000.

Australian Natural History has recently changed its format and broadened its outlook with articles of more general appeal. In the March issue (Vol 18 No 1) Jean Walker, talks about bush gardens and their new popularity. The idea of "naturalness with order" has been rekindled in the Australian breast and is rapidly replacing the lawns, azaleas and gravel paths of yesteryear.

A bush garden, she says, "can be a retreat, a back-to-nature thing, even a spiritual adventure," then she goes on to tell you how to make one. Jean Walker is the co-author, with her sister Betty Maloney, of Designing Australian Bush Gardens and More About Bush Gardens, which have done much to make native gardens acceptable in suburbia.

Salt-making among the Baruya people of Papua New Guinea is a fascinating story, one we first saw on ABC television, and tells how the highland people make salt by burning plant materials. Other subjects covered are Australian Carnivorous Plants (plants which trap insects), the habits of sea lions in the Auckland Islands, a population study — How Many Australians? Australian rainforest pigeons, and an archeological detective story (or how the Groenlandaspis was reconstructed). There's no advertising. Single copies are 62 cents posted.

Caveat Emptor

BY JEFFREY BIGMORE

I would like to urge people when buying their land not to be frightened of acting as their own solicitor.

The main thing, I guess, is the title check. If you live in Victoria, you'll find the man at the Melbourne Titles Office Enquiries very helpful. A small fee for the 'search' and photostat copy of the title will show who owns it and if there is any mortgage on it or such.

Next thing is to check if the rates have been paid, which can be done at the relevant shire council. The opposition's solicitor did it, since a refund goes to the ex-owners if they have paid. Finally, where the money goes is in the transfer of the title. A form can be posted to you from some Government department. Fortunately I had more help from the Enquiries man on how to fill in the form, but it is really quite logical.

After the ex-owner, yourself (the buyer) and witness have signed, you then pay the stamp tax (just around the corner for us Melbournians) and transfer form titles and transfer fee presented at the Titles Office finishes the job.

By the way, I asked the opposition's solicitor how much would stamp tax and transfer fee cost. After some 'umms' and 'ahhs' and back checking, he told me $157. Doing it myself cost about $70. I wonder what his fees would have been? Happiness.

Apparently there are quite a few traps in being your own solicitor, Jeff. It's very much a case of 'let the buyer beware'.

We suggest anyone thinking of this should first read: Conveyancing, Can you do it yourself? M. H. E. Lidden and Ethel Bohnhoff, Angus & Robertson, Price $1.50.

Good Things, Jane Grigson, Penguin Books, London, 1973. 380pp. $1.70.

Good things, in Jane Grigson's opinion, mean good eating, delicious food and the good living which results from them.

"I think food, its quality, its origins, its preparation, is something to be studied and thought about in the same way as any other aspect of existence," she says in the book's introduction.

The accompanying illustrations by M. J. Mott are warm and somehow very English, like the recipes in this very good cook book. Jane Grigson believes that the kitchen should be the centre of the home. There should be room for talking, playing, bringing up children, sewing, having a meal, reading, sitting and thinking.

The dishes cover fish, meat and game, vegetables, fruit and desserts and are drawn from forays to Italy and France and the old cookery masters and emphasise the creative delights of preparing food. Jane Grigson has also learned much from her English village neighbours, who, among other things, "have the sense" to grow their own asparagus, carrots, celery, leaks, parsnips, spinach and peas.

Some of the good things to be found include raised meat pies, seafoods, oggies (Cornish pasties), a chapter on salting meat, preparing garden snails for soup or Escargots a la grand' mere), jugged hare, making the most of asparagus, Mrs Beeton's carrot jam to imitate apricot preserve, Soissons-style haricot bean soup, Welsh mutton broth, Cock-a-Leekie (the Scottish chicken, prunes and leeks combination broth and stew), how to dry mushrooms, Risi e bisi (peas and rice), spinach pasties, Sir Issac Newton's baked quinces, gooseberry and elderflower jelly, Avgolemono (Greek egg and lemon soup), water ices and French cakes.

Good things. Good eating. Good value.

Love what you do — and learn quickly

BY HUGH & NAN NICHOLSON

After deciding that living on the land is to be our life and, having done so for a mere six months, we have found it many times more exciting and fulfilling than we had ever hoped.

And if you love what you do, you learn quickly. So we now feel we are in a position to pass on to others even more ignorant than ourselves some practical thoughts and ideas.

We have just bought 263 acres in the hills to the north of Lismore. About 30 acres is cleared, grassed creek flats and slopes, the remainder being mostly bush, with some areas of regrowth and lantana. Within a year we hope to be there to build our house and develop the cleared land sufficiently to support most of our needs, leaving the rest of the property as forest.

In the meantime we are saving the money required to start from the earth up by working as 'managers' of Big Tinderry Galloway cattle stud, about 30 miles south-east of Queanbeyan.

Our job is to help in everything involved in running the property — fencing, building, tractoring, looking after the cattle and general maintenance. Apart from this, our employer David Gallop wants to eat unpasteurised milk and cream, organic vegetables and real eggs, so we spend quite a bit of time caring for the cows, goats, poultry and garden.

As David also wants to experiment with herbal medicine for the cattle and is a convinced Keyline farmer, we think we couldn't have a better job.

COWS

At present we are milking two cows, Darkie and Buggery (originally Butterscotch, shortened to Buttery, and so to Buggery during a period of non-co-operation). We were fortunate in starting off with a quiet cow like Buggery since succeeding efforts to bring in other milking cows were just battles in vain. We no longer leg-rope them, after discovering that Buggery, an inveterate kicker, stood like a lamb without this irritation.

Most people expect to have to milk morning and evening. In fact, if you lock the calf up at night and milk in the morning,

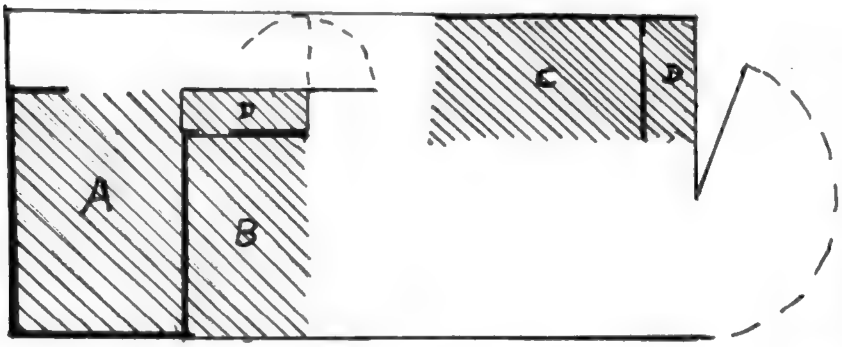
(a) you are not tied to your cow and can even miss one or two days milking just by leaving the calf with her at night. (This didn't dry our cows off at all);

(b) you end up with a calf either to sell or, if a heifer, to use as a milker. And calves brought up this way are often better than those always with their mothers;

(c) you can use the calf to make the cow let down more milk. Bring the calf out as soon as you bail the cow and let him suck for a few moments, making sure he covers each teat, return him to the pen and when the cow is milked dry, bring him out again.

You will get about half as much milk again and this time it will be much creamier. If the cows cannot see their calves at night, they are too agitated to milk in the morning so our calf-pen allows them to see their calves without being sucked.

OUR MILKING SET-UP



Heavy lines indicate solid walls. The rest is post-and-rail.
Shaded areas are roofed.
A: Calves' overnight pen.
B: Buggery's bail.
C: Darkie's bail.
D: Mangers for feeding cows during milking.

Hugh.

GOATS

Our goats were almost completely wild when we bought them, since milking does are impossible to get in this area. Although quietening wild goats takes a lot of patience, it's highly satisfying in the end. Wild goats are sometimes brought in to abattoirs (South Grafton is one) in truck-loads, can be got for nothing or next to, and you have a choice of hundreds of colours.

When we first brought Jedda and Chip home, we left them in their stable for over a week, so that they would regard it as home if they ever escaped or were suddenly frightened. They were then tethered on a long wire running into the stable. Now that they come to our call, they run free. We still stable them at night to protect them from cold and to collect much valuable manure and urine. There are at least as many nutrients in urine as in manure.

POULTRY

We have more ducks than chooks as we find them more attractive, especially the green-black Cayuga. The ducks are laying now in mid-winter when the chooks are supposed to have stopped. Actually we have plenty of hen eggs now, possibly due to the large doses of garlic, molasses and finely ground egg-shell which we add to the morning mash of layer pellets. Or alternatively because of the spare skim milk which is extremely good for the hen's and chicken's health.

Don't be unwary enough to buy debeaked hens — they can't forage as well, nor keep themselves clear of parasites. We keep the chook-shed floor thickly covered with wood shavings which we can have for the carting from a Queanbeyan joinery. Don't use pine shavings as they take too long to breakdown and are strongly acidic, nor tallow wood because it is supposedly toxic.

If you have a broody hen and want to hatch chicks, shut her up with the rooster for some days to ensure that the eggs will be fertile. Keep other hens away from the nest until she hatches her eggs, because they may nip in and lay while she is off the nest. She will only sit for 21-22 days and any eggs laid too long after she begins to sit will not hatch.

We find geese are worth keeping for their beauty alone, and they cost so little to feed, being predominantly grazers.

Our main reference book for invaluable information is **'The Herbal Handbook for Farm and Stable' by Juliette de Bairacli Levy (see EG6).**

GROWING

We don't have much feedback on gardening which can't be picked up in organic gardening books. Wine flagons with their bases cracked off are good for keeping off bugs and light frosts — our first frost was in March. We dip them in boiling water and then in cold to break the base cleanly.

Come the spring, we shall plant one whole paddock (about five acres) in medicinal and aromatic herbs such as thyme, sage, rosemary, garlic and comfrey to be used periodically by the cattle, or if need be, ailing ones.

At Lismore we plan to establish hedgerows of medicinal plants and herbs so the animals can medicate themselves. After reading the **'Henry Doubleday Research Association Australian Newsletter' (Feb '74, No 14),** we shall be growing comfrey as a fodder crop. Well worth reading.

Working here before moving to our own place, we have learnt to look at farming as a whole system, rather than just a matter of growing vegetables and raising animals which provide you directly with food. We have no illusions about being totally self-sufficient.

If you too accept this, then you must determine whether extra money is to come from a saleable skill, an outside job, or from the farm itself. If your farm is to provide you with money from its crops and/or stock, you must know how to maintain the soil system as the basis for all the other life dependent on it.

You need to know how to increase soil fertility year by year, which grasses are best for your area, how to rotate crops, how to rotate animals to avoid worm infestation, how to distribute water over the property, prevent erosion and so on. In other words it is worth finding out about conventional farming practices even if you are quite sure you won't be using superphosphate or insecticides.

Though once we scorned the idea of a tractor and other mechanised equipment for our farm, we now intend buying a 35hp tractor with a slasher for the Crofton weed and lantana, and a chisel plough.

These shouldn't be more than about $1000. With these we'll be able to reclaim the acres of lantana regrowth and sow a pasture which will contain a great variety of grasses and legumes.

Eventually we plan to raise horses and goats as our living. Until herds of these are established, it may be necessary (in spite of moral scruples), to raise some calves for sale.

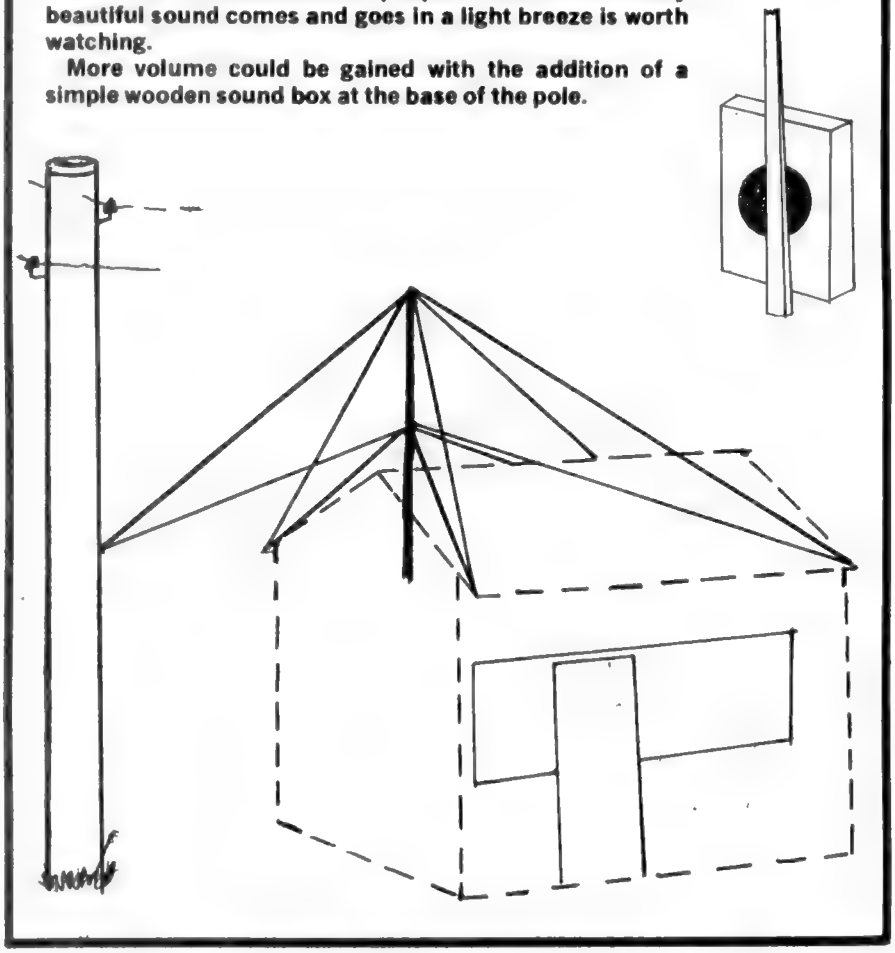
To increase the soil fertility

Make a wind harp!

We built one on top of the workshop from a six foot piece of wood and ten radiating stays of nylon fishing line attached at different lengths and tautness.

The look of amazement on peoples' faces as the eerily beautiful sound comes and goes in a light breeze is worth watching.

More volume could be gained with the addition of a simple wooden sound box at the base of the pole.



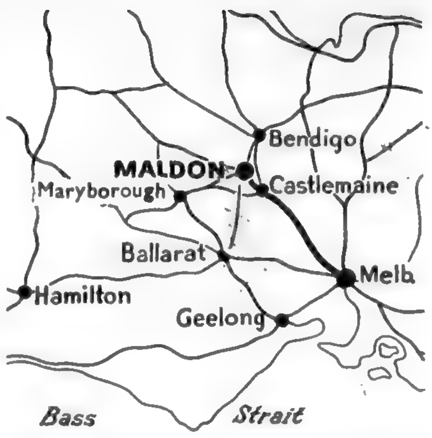
naturally, we will use under-stocking, many small paddocks, rotational grazing, rotational cropping and legumes. By having small paddocks, it is possible to concentrate the stock in a particular field.

In this way, when the pasture or crop reaches its growth peak, the stock can be let in to eat it down before nutritional value is lost. Also, the field is heavily manured for you and can be left fallow, prepared for the next crop, or just regrowth of the eaten-down crop. Intense use of legumes to fix nitrogens in the soil, will also induce quite amazing increases in fertility.

Rotational cropping can have two meanings. Cattle do not graze as close as sheep or horses, which graze almost to the roots. So, if sheep follow cattle, they may both feed successfully from the one crop. Alternatively, by following legumes with a mixed grass/legume pasture, followed in turn by a crop (corn, millet . . .), then a cover crop, fallow or back to legumes, the soil is not continually depleted of a particular set of minerals.

We consider ourselves fortunate in working for an employer enthusiastic about Keyline, organic food and herbal animal medicines. And we are sure that a little searching would reveal other farmers similarly willing to have an organically-minded type working for them, gaining in knowledge of conventional farming methods while providing organic vegetables, milk, eggs, etc. The wages are not high — we get $100 between us after tax per week, but with free house, electricity, petrol, eggs and milk, and whatever other food we can grow.

HUGH & NAN NICHOLSON,
PO Box 46,
Queanbeyan, NSW, 2620.



Maldon is a 19th Century National Trust town, 11 miles north west of Castlemaine, Victoria, which is gradually being "taken over" by craftsmen and their shops.

Driving in from Melbourne (84 miles south), you'll first see Neville Wilson's pottery on the left, amidst the foliage of some beautiful old trees. Neville wheel-throws mugs, plates, casseroles, steam-cookers and teapots, which he finishes off with delicate Oriental designs.

Further along, still on the left, is the Maldon Arts Centre, where artist Geoff Stocks has paintings and a wide variety of craft goods for sale. Craft seems to run in the family as Geoff's brother, Norman Stocks, runs the Berrima Galleries on the Hume Highway south of Sydney.

At the road fork you'll see on the right-hand side the Jolly Jumbuck, housed in what was once a harness store and saddlery. Now Narelle Bonnet sells macrame, candles and raffia and gives spinning lessons.

Next door in the former butcher's shop is the studio of steel sculptor Ray Tyrer, who also does wood assemblages and has paintings for sale.

Along Reef Street to the left is Stanyer's Pottery, where Ray and Ellen Stanyer sell useful pottery goods with distinctive colourful glazes. The beautiful milk jug, splashed with green, red and blue, which we bought there now takes pride of place in our kitchen dresser. They also sell herbs.

All the shops are open at weekends. Maldon is in the heart of the Victorian goldfields and there is plenty to see in the surrounding area, including tunnels, mines and a famous beehive chimney.

earth people write:

Dear Keith and Irene,

I found the article on 'garbage into compost' in Auckland New Zealand (EG2) very interesting, but thought that they had missed out one aspect. Surely if they were going to outlay that amount of money they could have taken it one step further and extracted the gas from the garbage while it was being made into compost?

I feel that councils will have to do this eventually to offset their costs. There must be a limit to how much you can soak the average household for rates. They could go into the domestic gas supply as local councils do in England — and what a splendid thought: all your garbage having gas taken out of it and returned to you in the form of gas for heating and cooking; all the metal extracted and returned to the steelworks, all the glass returned to the glassmakers, or to the local council, where it could be broken up to serve as a road topping. What's left could be turned into a high-grade fertilizer for local farmers and gardeners. Sewage could be integrated into this system also.

rowing large sums of money from the Federal Government, but I think that it would generate large sums of money for councils. Take the price of garden soils in the Melbourne area, approx $7 per cubic yard. I can 't imagine the tonnage of garbage that Melbourne and outer suburbs would generate per week!

Used properly we could push back the so-called Dead Centre of Australia, and lead the world in cleaning up the environment. The world looks for an example — once it is set and there is money to be made from it, then they will follow. This could work for larger country towns too.

Perhaps it's a dream, but it would be nice to think that we could have all this without robbing the Earth. It's inescapable: just recently Nunawading, Mitcham and another council paid $2,000,000 for a hole! Can you imagine that money for a hole in which to put garbage and it won't last for five years? They and other councils are desperate for space to tip refuse.

Cyril Fletcher, Mooroolbark, Victoria.

Drat those two people who started EARTH GARDEN! I start looking for something on sprouting and read about Nimbin instead. Is there a spot at Nimbin for oldies? Not as tourists; as part of the idea. Any place to stay to join in?

For those who might founder when EG10 carts us off, there is a little life-boat called Organic Farming and Gardening Society, $2.00 per annum, David Stephen, 12 Delta Avenue, Taroona, Tasmania, 7006, which will help fill the awful void.

Russian comfrey plant is now available from: New Gippsland Seed Farm, Silvan, Victoria, 3795.

As I can't get wholemeal flour here, only at Albury or Yarrawonga, 35 miles each side, I am interested in EG readers who are growing their own grains and would like to hear about it. I don't imagine it's broad-acre farming? Also like to learn about growing, harvesting and starting legumes, as well as where to get seeds.

EG is keeping me sane. (It is, isn't it?)

The best survival hint of all is to reduce the number of children everywhere. Smaller units will have a better chance of getting through the hard times which are inevitable.

Pauline Green, Corowa, NSW, 2646.

Dear Earthy Keith and Irene,

Great to read your wholesome EG books of nature. They fill our minds and bodies with fruitful thoughts and ambitions.

After living 14 years in suburbia and having my beautiful, beloved horse killed on the roads, I decided to take the plunge and move to the country where I belong.

I advertised for a farm to live on, and it was a success. I now am settled happily with a beaut farming family, plenty of horses and animals, and a garden to grow stacks of organic vegetables in.

I feel sure there must be other kids who feel really deprived of our natural earth. I would love to help. I am 16 years old and still at school. If anyone feels like writing, that would be great.

Hugs of nature, peace and love, Margy Gash, "Gamboola", Barraba, NSW, 2347.

Dear Keith and Irene,

I am only 15, but luckily I have realised the proper way to live with the help of such magazines and books as yours. I think you and others like you are doing a marvellous job in guiding people in the right direction. I just wish more people could get hold of your magazine ... already I've begun to see the world through a different light.

Yours faithfully, David Brown, Launceston, Tasmania.

Dear Irene and Keith,

We finally got around to giving the boys a gardening lesson today. Very simple — there were only five of them — and they weeded and planted their own little square plot of cress or Chinese cabbage. But they loved it just so much — and they certainly agreed with us that lots of love makes the plants grow twice as lovely, and put that philosophy into practice.

As we (teachers) learn a little more than the nothing we know now, so the boys can learn gardening with us. Your EG3 has really helped our compost heap.

Peace and love, David (School Secretary), Sunrise Community School, Belrose, NSW.

Dear friends,

We live in the bush. There are no roads, shops etc. We live with native people living completely off their land, gardening, hunting and fishing. We ourselves are able to get supplies from outside, but we have big vegetable gardens, keep goats and chickens and cook our own bread and cookies.

We see mother nature so much a part of peoples' lives and our own too. Our three children, 5, 6½ and 8-years-old, are all healthy and happy. They spend most of their time outside, building houses with whatever nature supplies and playing with baby animals, seeds or whatever else they can find.

Yours faithfully, Dora Gray, Tung, via Wewak, Papua New Guinea.

Dear Irene & Keith,

I've bought a hectare of land which I hope to make as self-sufficient as possible. The land contains an incredible 2-storey ruin. The walls are quite sound and the main job will be to roof it over.

I would very much like to have a thatched roof and although many books give a scattering of information, I have found it very difficult to get the finer technical details that would help me to do the job properly. Also I would like to know if it is possible to collect the rain water from a thatched roof as most countries where they have such roofs have no need to worry about this.

Hoping one of the EG readers may be able to help me.

Love and peace, Francis Walling, 33 Eighth Street, Bowden, South Australia, 5007.

KEY

Home deliveries of organic, Biodynamic and chemical-free foods have been organised in the Sydney area by Kuradui Organics Pty Ltd, of 40c Chifley Street, Smithfield.

Clem Vermeulen, director of Kuradui, is in touch with natural farmers throughout Australia. He had made it his aim to distribute produce at fair prices, with only a low markup. Goods are delivered by Country Fresh Health Foods Pty Ltd, who also distribute pure fruit juices.

Besides a wide range of fruit and vegetables, Demeter stone ground grains, yeast free bread and other BD produce, sun dried fruit and nuts, and seeds, pulses and grains are also available. Delivery is free and you may make a telephone order. Ring: 604 8686 or 604 7775.

A roadside stall will be open at weekends on the Windsor Road, Rouse Hill (second on the left past Annangrove Road coming from Windsor).

HEAR YE! HEAR YE!

Mrs Josephine Richardson, secretary of The Organic Growers' Association of New South Wales, will hold an open day at Sahara Farm, Kenthurst, near Sydney, on Sunday, October 13, 1974.

This is a unique opportunity to visit an organic farm and at the same time support organic food growing.

Annual membership of the Association is $4 per person or family and meetings are held on the first Wednesday of each month (beginning in October) at 8 pm at Leigh Methodist Church Hall, 119 Macquarie Street, Parramatta.

* * *

The Craftsman's Market, where potters, artists, leather workers, clothing, candle and surfboard makers work, display and sell their goods is at Trees Road, Tallebudgera, Queensland.

Diane and Mark Green would also like to start a wholefood eating place and need help organising theatre and craft classes for local children.

At last a mail order service specialising in the kind of books we recommend has been started here. Compendium Pty Ltd, should have its first catalogue ready for publication as we go to press.

It will list hundreds of titles covering farming, gardening, shelter, crafts, home industries, small-scale technology and self-sufficiency, including many British books rarely seen in Australia.

Criteria for stocking books, a partner in Compendium, Gregory Ket, told us recently, is:

(1) Relevant to autonomy and self-reliance

(2) Of practical use to the individual or small community

(3) Of high quality and/or low cost.

"The aim of this process is to make available the best, and most useful books on the various subjects", Gregory said.

Send 50 cents for a post-paid catalogue or call in at the bookshop for one at 30 cents. Address: Compendium Pty Ltd, Centreway, 259 Collins Street, Melbourne, Victoria, 3000. Telephone: 63 8412.

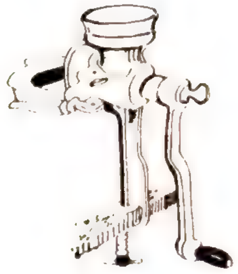
Mr Organic is the vital link between organic food growers and consumers recently established with Brisbane headquarters by Robert Hennig and Glenda Thompson.

The happy little farmer with the spray-free apple has been registered as a trade mark which will appear on produce distributed under the Mr Organic label.

Already there are 24 growers registered with the co-op and 36 non co-op growers. Consumers in northern New South Wales and in Queensland may join by paying an annual subscription of $5. This gives them access to a cash-with-order service, information sheet, directory of growers and planned newsletters.

"Mr Organic is growing and flourishing," says Robert Hennig. "The biggest problem is finding enough growers. There are plenty of consumers. Anyone who wants to grow will have a ready market for his goods — we pay cash and/or barter with dry goods, hardware or foodstuffs".

For further information, send a stamped envelope to: Mr Organic, 29 Lancing Street, Pullenvale, Queensland, 4069. Or telephone: 88 6400.



The Corona hand stonegrinder (illustrated) has arrived in Australia and is available from Natural Health Appliances, 16 Robert Street, Telopea, NSW at $36, plus freight.

The mill is ideal for dry grains such as corn, but will clog when used with oily seeds such as sunflowers. The Spong No 4 hand grinder mentioned in EG5 has actually been reduced in price to $20 plus freight. Prices are already discounted for EARTH GARDEN readers.

Dear Keith and Irene.

When the bundle of magazines came I'm afraid there wasn't much work done for a few days until I had read them all. Now I am going through them all again and feel that I will be referring to them again and again. EARTH GARDEN really is a practical magazine. I've lived on the land all my life so know from experience.

Neil Douglas' article was extremely good and I'm so pleased he brought to light the fact that to live on the land one needs a lot of self-discipline. The average worker in town has no conception of this, only independent businessmen do. I do wish I could predict rain as Neil can. We are experiencing drought conditions at present with no relief in sight. Our climate is far too dry to garden as he does, one has to work really hard to get anything. I am lucky as I have a lot of wheat stubble to use as mulch, without which it would be impossible to garden.

The article on mud bricks interested me greatly, we have ideal soil here for them. If you plough the ground while it is at all wet it comes up in clods that take literally years to dissolve. This was a bit of a blow to Ivan when we first came here as he was used to brigalow soil which dissolves and sponges after rain. I would like to write to some fellow EARTH GARDENERS.

Best wishes, Jan Stiller, Nagoorin, Queensland.

Dear Irene and Keith,

Have found reading EARTH GARDEN most interesting, the language colourful. The enthusiasm which you young people show and the determination to get back to nature is delightful to behold.

In terms of years my husband and I would be termed 'oldies', but we are happy travellers, living in our caravan. We've done a lot of travelling around Australia, and find North NSW and South Queensland our favourite place, so will be looking for a few acres up there early next year. Know of any becoming vacant?

All best wishes, Betty and Syd Plummer, Mitchell Park, South Australia.

Dear Irene and Keith,

There is a growing interest in Adelaide in chemical-and-poison-free food, and interest is being fostered by the Organic Food Movement. As we are members of this and the SA Soil Association, we will be embarking on full time organic farming from next spring.

We have 31 acres, previously grazing land and, fortunately, unsupered for many years, at Mount Pleasant, South Australia. Over the past 18 months we've been very busy replanting with native trees and trying to see what results can be obtained for vege-growing — cauliflower and broccoli are doing well. Fruit trees planted last year are okay.

We aim to support ourselves selling organically-grown foods and would welcome letters from others who are endeavouring to do likewise. We also intend doing all our own building using salvage materials, bricks, timber etc.

Yours sincerely, Chris and Gail List, 19 Towers Road, Bridgewater, South Australia, 5155.

Dear Keith and Irene,

I enjoy your publication immensely, although as a longtime farmer and handyman I am apt to shudder at some of the optimistic simplifications which it contains at times.

Still, simplification encourages willing amateurs to try, and enthusiasm will carry you on through many failures. When I look at the terrible desecration of the environment which professionals are wreaking I think maybe we should only allow amateurs into the bush!

Nearly forgot — how about including a Bio-dynamic planting chart in every future edition? For those of us far flung from capital cities, such information isn't easy to come by.

Those of us who are keen on Nature's ways find the idea of haphazard planting times undesirable (probably you do too). Forty years in the bush tells me that Nature has decided cycles, independent of rain and climate. Bio-dynamic planting data seems to have captured a lot of the secrets — which they haven't imparted to me yet.

Peace, Rob Thomson, Thangool, Queensland.

Dear friends,

Two years ago we left Melbourne and bought 450 acres at Deep Lead, near Stawell. We have established a herd of beef cattle, milking goats, a vegetable garden etc, and plan many more subsistence-type activities which hopefully will complement the beef enterprise, which is on a relatively small scale.

Being young and somewhat ignorant we would welcome an exchange of ideas with any interested people that would like to write or call. We are situated on the Melbourne-Adelaide Highway between the 150 and 150-mile posts.

Nev and Julie Dunn, PO Box 215, Stawell, Victoria, 3380.

Howdy Aussie,

I'd like to correspond with some backwoods mountain folks. I'm an Oregon mountain man thinking hard about Australia — would like to trade some Oregon bull for Kangaroo trinkets.

Love to ya' all, Lable Galper, Lorane Rt, Box 428, Lorane, Oregon, 97451, USA.

Dear Keith & Irene,

Have enjoyed EARTH GARDEN tremendously from the very first issue — have mastered the art of bread baking and churn butter regularly. Our garden, until raided by sheep one afternoon, was full of vegies and herbs — now it's sadly lacking, though the sheep look great. Wishing you continuing peace, happiness and many more EGs.

Lyn Rivett, Hamilton, Victoria.

Dear Keith and Irene,

After having read our first EARTH GARDEN we must thank you for this great guide to living. It is all too easy to be sidetracked from this basic and most enjoyable approach to life. Your magazine has provided the yeast for many plans and dreams which we hope to live out in the future.

Yours sincerely, Don and Rhonda, Merbein, Victoria.

Dear Keith and Irene,

I could say a million things, but they've all been said before. I'm just happy that I've read EARTH GARDEN. Sue and myself have plans to move to the country in the not-too-distant future, but like the majority of people in Australia, we're having difficulty in saving money to buy some of our inherent right.

Love and peace, Noel Rafferty, North Carlton, Victoria.

Dear EG people,

After years of soul-destroying Public Service work and more in the fantasy world of Television, am about to take that "one giant step" into the Garden: a cherished dream at long last nearing realisation.

What a comfort to discover a journal such as EG on the eve of the preparations — even if it was No 7 and has been around for a long time! Looking forward to the remainder of the series.

Meanwhile, Peace and Plenty, Keith Hetherington, Frankston, Victoria.

Dear People,

Chanced upon your magazine the other day. Congratulations on content quality and the great spirit behind the work. Makes a bloke do cartwheels hearing of your (and your contributors') determination to put person-values back into life. Keep it up!

Please continue to put in your articles lists of sources of further reference. They are of especial help to amateurs like me. I think of the apiary article in EG4 as first-class in this respect.

May the fulness of peace be yours, Paul Appleton, Springwood, NSW.

Fifty years of

The young Rudolf Steiner.

The Bio-dynamic method of gardening and farming is half a century old this year.

It was in June, 1924 at Koberwitz in Silesia (eastern Germany) that Dr Rudolf Steiner gave a series of lectures to a group of farmers who had sought his advice and instruction.

The farmers were practical men, worried by the decline of the soil and the nutritional value of their crops. From these talks and conversations emerged the unique approach to agriculture which grew, after field experiments, into the Bio-dynamic system.

Rudolf Steiner, an Austrian, was then aged 63 and well-known variously as an educator, artist, writer, scientist and philospher. But his chief claim to fame was as the founder of the spiritual school of **Anthroposophy** (wisdom of men). Steiner himself described this as "a way of knowledge which undertakes to guide the spiritual in man to the spiritual in the universe". It was, in short, a scientific approach to spiritual knowledge.

The term, **Bio-dynamics** is derived from two Greek words: **bios** (life) and **dynamis** (energy). It is intended to sum up the phrase "working with the energies which create and maintain life".

Rudolf Steiner, an undoubted genius, died in 1925. But before his death he worked closely with a young German-born scientist named Dr Ehrenfried Pfeiffer, who brought the Bio-dynamic concept to the United States in 1930.

Dr Pfeiffer created the Bio-chemical Research Laboratory at Spring Valley, New York (site of Threefold Farm) and devoted his life to developing the practical application of Rudolf Steiner's work.

He developed a range of herbal preparations, sprays and compost 'starters', and testing methods using chromatography and crystallization. Dr Pfeiffer died in 1969.

From the start Rudolf Steiner's Bio-dynamic system came into conflict with the 'orthodox' agricultural methods of the NPK chemical fertilizer school, then coincidentally enjoying its first boom in Europe.

Dr Steiner argued that healthy plants depend on living soil, rich in organic matter and micro-life, on biological pest control, on plant relationships (companion planting), on crop rotation, on mixed culture and on the influence of the cosmos, particularly in the forces of energy of the sun and the moon.

Bio-dynamics takes all these factors into account. It is a scientific approach to organic growing methods, more rigid in its routines, more didactic in its requirements.

While the average organic gardener is likely to build his compost out of anything and everything organic, the Bio-dynamic gardener determines the specific proportions of plant materials, garbage, soil and manure. Usually the BD heap is 10 per cent soil. Compost is treated with a BD preparation or starter.

The differences between the approaches of the organic and the Bio-dynamic growers is largely one of degree, belief and dedication.

In the past, the Bio-dynamic Farming and Gardening Association in the United States and other BD organizations in Europe have made no campaigns or promotions of their philosophy and work.

People are expected to "come to" Bio-dynamics, just as students at Steiner and Waldorf schools "find" Anthroposophy if and when they desire to do so — it is not a subject on the school programme.

Heinz Grotzke, editor of Bio-dynamics quarterly magazine had this to say in the Winter 1973 issue (no 105):

"The Bio-Dynamic Farming and Gardening Association has not made a real effort, in the past, to promote the application of its agricultural methods beyond a mere reference to existing literature or to the work of practising growers. We feel that time has come for us to reach out to a wider public.

"With a growing awareness of the need to preserve the natural environment, more people have in recent years expressed an interest in bio-dynamic farming methods, and many have actually begun to implement them on their farms. Many more, without doubt, are still searching for and have not found, the road to a humane solution to the problem of proper food production, simp'y because a knowledge of our methods has been unavailable to them".

There have been few signs of this type of thaw in Australia, however, where the attitude of many people

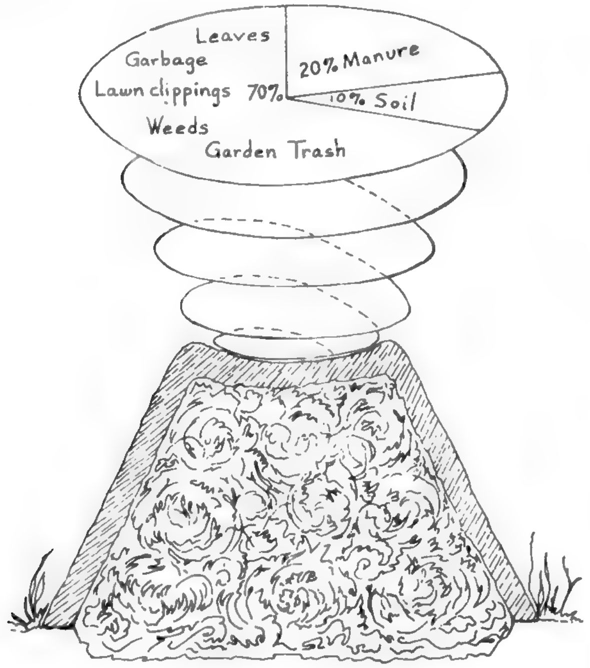
Bio-dynamics

connected with Bio-dynamics does little to encourage enquiry and has all the overtones of a closed society. Most of the information presented here comes from the United States.

How then, do we learn about Bio-dynamics? In our experience it requires persistence. The first step is to read one of the introductory books reviewed here, all of which are of general nature and refreshingly free of jargon.

Next, try to find some practising Bio-dynamic gardeners or farmers, read more advanced literature and attend lectures if possible. If you are interested enough and really believe BD is for you, then it will flow along.

The Pfeiffer Garden Book, edited by Alice Heckel, The Bio-dynamic Farming and Gardening Association, Stroudsburg, Pennsylvania, 1969, 199pp. Usual price $3.95.



CROSS SECTION OF A MIXED COMPOST HEAP

The proportionate mixture of 20 per cent manure, 10 per cent soil, and 70 per cent leaves, garbage, weeds, and lawn clippings cited in the picture is one which Dr Pfeiffer gave. The manure in this case would probably be cow manure, perhaps with straw bedding. This is often difficult for the home gardener to get hold of nowadays. This is often difficult for the home gardener to get hold of nowadays. Two to four bags of dehydrated manure to about 1½ cubic yards of mixed raw materials will take its place. There are many other possible combinations and ratios of the different materials used in compost heaps.

The Pfeiffer Garden Book is a Bio-dynamic manual especially written for the home gardener. It includes a brief history of the method and outlines its difference from the organic system.

It includes a complete garden plan for a 30 x 46 foot area and a compost yard 18 x 14 feet, with paths and areas in which crops are sited in combinations which follow the principles of companion planting.

Details of the Bio-dynamic sprays and preparations are outlined, then come gardening tools, the compost yard, a full chapter on Herbs, The Dynamic Plants (a miniherbal in fact), the family fruit bowl (strawberries, raspberries, grapes and fruit trees), cultural notes ranging from artichokes to watermelons (with storage and companionable details) and a final chapter on Bugs, Beetles, Disease and Bio-dynamics.

Soil Fertility, Renewal and Preservation (published in the US as Bio-dynamic Farming and Gardening), Ehrenfried Pfeiffer, Faber and Faber Ltd, London, 1947, 196 pp. Out of print.

This earlier book presents the case for Bio-dynamic farming and outlines, in a practical way, "how the biological unity of the farm may be achieved and developed." There is a full chapter describing how to convert an orthodox farm into a Bio-dynamic one.

Steps in this changeover include growing fodder on the farm, increasing the amount of cattle, stepping up the use of home-grown food, developing strong seeds, breeding cattle and balancing out the proportion of arable and pasture land.

"Farms without cattle cannot be converted to the Bio-dynamic system," Dr Pfeiffer observes. "In gardening, where there can be no cattle, the purchase of stable manure or other organic matter is the only way".

This very useful BD farming handbook also covers Bio-dynamic composting, preparing a manure heap, market gardening, dynamic herbs, preparations and case histories of Bio-dynamic farmers.

The area planted with vegetables should in its turn be broken up by rows of high and low growing plants. These give shade in time of drought, help bring about healthy soil fermentation and provide a windbreak. To obtain the beneficial effect of legumes, runner beans, staked peas, etc, are useful.

Sweet corn can also be used as an inner hedging plant. In the shelter of these rows, all the lines of low-growing plants can be set out.

The most intensive planting of the Chinese, which often employed as many as six varieties of plants side by side, has produced good results for thousands of years. In their case, ridges are made in the ground. One kind of plant is set on the ridge which grows swiftly. Another kind of plant comes between the ridges — shaded and kept moist, this grows unhindered by dryness. When this latter plant gets higher, the one on the ridge is ready to harvest and the plant growing between can then in turn shelter the ridge.

Companion Plants, and how to use them, Helen Philbrick and Richard B. Gregg, Robinson & Watkins, London, 1972 (first published 1966, 93 pp).

Small book — dynamic information.

The study of mutual influences of living organisms (companion plants), is an important aspect of Bio-dynamics.

Based on the premise that "nothing happens in living Nature that is not in relation to the whole", Bio-dynamic gardeners and farmers have set out to study the tangled web of inter-relationships, effects and counter-effects involved in the biological principles of horticulture.

Each plant influences the growth of other plants in its proximity. Each growing plant enriches or deprives the soil of nutrients, affects the micro-life of nearby soil, loosens the soil and affects insects by odours or excretions of roots or leaves.

"This little book," says Dr H. H. Koepf in the introduction, "is definitely expected to stimulate teamwork in a wider sense. It is not a book to be read once but to keep at hand for daily work in the garden and in the field."

The book's 'companionable alphabet" lists plants in alphabetical order and is packed with concise detail. It really is a gardener's companion, a good introduction to Bio-dynamic ideas, and one of the best gardening books around.

Companion Plants is available by mail from: Compendium Pty Ltd, Centreway, 259 Collins Street, Melbourne, Victoria, 3000. Price $4.95, with 30 cents postage.

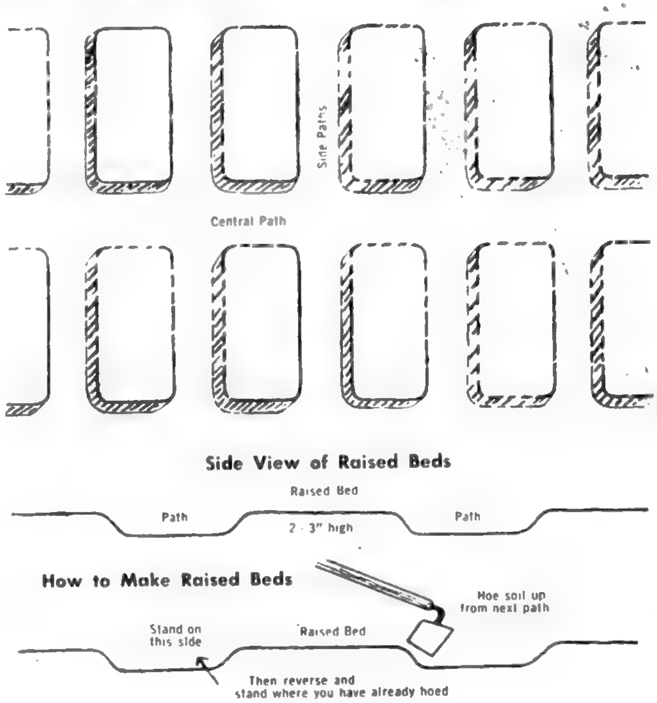
LEMON BALM (Melissa officinalis) Lemon balm, or Melissa as it is often called, is one of the fragrant herbs which radiates a beneficial atmosphere all round itself. As a tea by itself, either fresh or dried, or as an ingredient in a tea of mixed herbs, it is pleasant and refreshing.

Lemon balm in pastures is said to promote the flow of milk in cows.

Tea made of balm and marjoram is given to cows after calving to strengthen and content them.

Perhaps the most valuable use we have found for Melissa is to rub the inside of the bee hive with a handful of the herb after hiving a new swarm. The swarm will never leave the hive.

Gardening for Health and Nutrition, John and Helen Philbrick, Rudolf Steiner Publications, New York, 1971, 93 pp. Our copy from Soil & Health Publications, PO South Warrandyte, via Ringwood, Victoria, 3134. Price $1.55, including postage.



The typical biodynamic vegetable garden is arranged in raised beds, one or several carefully chosen vegetables to a bed, with paths in the spaces between the beds. This makes a charming pattern with rectangular patches of various plants bordered by narrow paths. A convenient size for the beds is about 15 feet long and 1½ feet wide. They need not be raised more than four to five inches high. If herbs are planted at the ends of the raised beds, bordering one central path, the visitor walking down that path enjoys one herb after another. This is also an ideal arrangement when one runs along the path, gathering the ingredients for a salad at the last minute before dinner is served.

This is a smaller and more personal account of Bio-dynamic gardening, written by a husband and wife team, which has much of value to say about the **attitude** of BD practice.

"The Bio-dynamic gardener watches for special factors," the Philbricks say: "He tries to establish a balance between plants that deplete the soil and legumes which restore soil nitrogen. Already depleted soil he tries to balance with specially built composts to restore the soil fertility".

Elsewhere it is suggested that "an hour spent leaning on a hoe may do more good than thrashing around in the garden in an aimless way". The BD gardener should study his garden, his plants, the movement of bees and birds, the season, herbs and insect activity, seeking the cause and effect and evolving an overall picture of the whole.

Subjects covered briefly include planning the garden, raised beds, seeds, tools, BD compost, mulching, insect pests, harvesting, herbs, flowers, lawns and crop rotation.

Other books recommended:

Agriculture. Rudolf Steiner.

The Bug Book. Harmless insect control. J. & H. Philbrick.

Booklets:

Compost — What it is. How it is made. What it does. H. H. Koepf. 18 pp.

Bio-dynamics — A Short. Practical Introduction. E. E. Pfeiffer. 8 pp.

Bio-dynamic Sprays. H. H. Koepf. 16 pp.

For information about Bio-dynamic books and booklets, send a stamped envelope to: **The Manager, Anthroposophical Book Centre, 204 Clarence Street, Sydney, NSW 2000.** The bookshop is open each Thursday afternoon and Saturday morning.

For information on Bio-dynamic preparations and sprays, Bio-dynamic methods and how to apply them, write to: **The Hon Secretary, Bio-dynamic Agricultural Association of Australia, Powelltown, Victoria 3797.**

Bio-dynamics, edited by Heinz Grotzke, issued quarterly, usually 30-40 pages. Annual subscription $US4. Write to: **Helen Philbrick, 165 West Street, Duxbury, Massachusetts 02332, USA.**

b.d. in holland

BY BART LEBBING

As you know, Holland is a very small country, with loads of people. That's why industry is increasing all the time with more and more plastic food.

Costs for the farmers are getting higher, so they are using more machines and more weed and insect killers. Now there seems to be quite a large group of people who have become aware that we are destroying our Mother Earth.

Most of these people you will find in the city, eating organically-grown food and drinking unfluoridated water. In the country there are only a few people working on it, unlike England, where big groups of people have moved back to the land from the cities.

Most of the Dutch farms are Biodynamic and the farmers belong to the **Proserpina** co-operative, which collects vegetables and distributes them to outlets in the towns and cities. The majority of BD farms grow vegetables and herbs and keep animals. Only a few grow grains, and most grains sold in Holland are imported from **'Demeter'** in Germany and **'Lima'** in Belgium.

The orthodox farmers laugh about Bio-dynamics and say it is impossible because of the high cost of paying workers for weeding and nursing the plants. That's why the organic farms mostly work with volunteers and a few steady workers.

In the east of Holland, at the village of Wapersterveen, is the Hobbitstee commune, which is trying to buy farms and find people to work them using natural methods. They also sell well water to towns where water is fluoridated.

Diane and I think this is the best method of spreading organic farming — forming a small group of people and starting off with everybody having his task. I hope we'll get it together in Australia soon.

There is also a school of Bio-dynamic farming, the Landen Tuinbounschool Warmonderhof near Leiden, where I went for a year. It's good to have a school as a bridge from the city to the land. I stopped because it seemed to be going too slowly for me.

The school is subsidised by the Government, which makes demands on the type of subjects. So you get the usual subjects covered in any agricultural and horticultural school, like mathematics and physics, and, in my opinion, too little is taught about Bio-dynamics.

However, the school does really good things, like trying all kinds of different vegetables, even tropical plants. But they don't do experiments with the soil and the agricultural course by Rudolf Steiner is half forgotten. Maybe this is because the school has been going since 1947 — it's a bit too set in its ways.

There is a large composting area, easy to approach with the tractor. Not too much organic matter is used, mostly cow dung and the Bio-dynamic preparations. Nettle liquid is sprayed against lice and other insects and horsetail liquid against fungal diseases. These are sprayed every week, mostly as a preventative. Here are the recipes:

STINGING NETTLE (Urtica dioica):

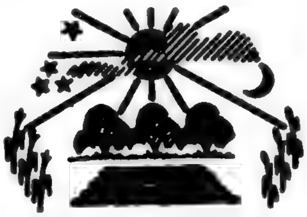
Take one part of stinging nettle plants, put this into a barrel and add 10 parts of **rainwater.** Leave the mixture for 24 hours before spraying over the crops.

HORSETAIL TEA (preparation 508):

Dry out the plants at first, in a shady place, then use about 4 ounces per gallon of rainwater. Boil this slowly. Horsetail (Equisetum arvense) is very rich in silicon.

There's a big herb and flower garden at the school, which is really like a paradise. Beautiful smells! The bees also have a good time there.

The BD organisation in Holland has a magazine and prints books in Dutch. For those interested, the address is: B. D. Kereniging, Vruchtbere Aarde (fertile soil), J. Copyn, Groenekan, Netherlands.



BIO-DYNAMIC SUPPLIES

DEMETER bread and other goods are becoming available at many health food shops. The following list covers fruit and vegetable outlets:

SYDNEY

Kuradui Organics Pty Ltd, 40c Chifley Street, Smithfield.

Weekends, Street stall, Windsor Road, Rouse Hill.

Hygienic Food Supplies Pty Ltd, 97-99 Ryedale Road, West Ryde.

Warrah Farm, Harris Road, Dural (vegetables).

QUEENSLAND

Mr Organic, 29 Lancing Street, Pullenvale.

Wholefoods Co-operative, 451 Milton Road, Auchenflower.

Whole Earth Store, 46 Hospital Road, Nambour.

MELBOURNE

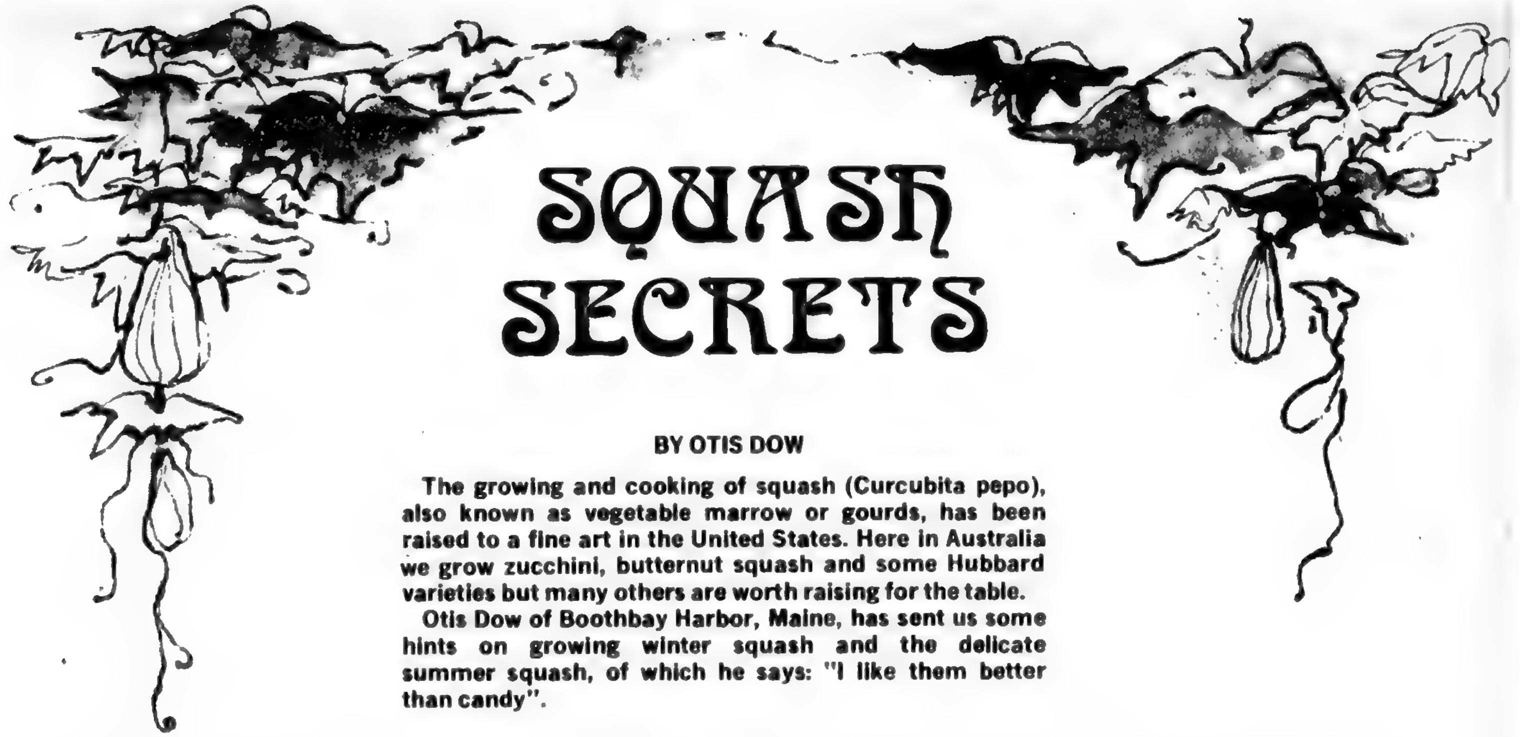
Angelo D'Agostino, 601 Station Road, Box Hill.

Eltham Fruit Supply, 978 Main Street, Eltham.

Nature's Store-House, Shop 8, Floriston Road, Boronia.

Naturopathic Centre, 156 Ross Street, Port Melbourne.

Bruce Standish, 723 Glenhuntly Road, Caulfield.



SQUASH SECRETS

BY OTIS DOW

The growing and cooking of squash (Curcubita pepo), also known as vegetable marrow or gourds, has been raised to a fine art in the United States. Here in Australia we grow zucchini, butternut squash and some Hubbard varieties but many others are worth raising for the table.

Otis Dow of Boothbay Harbor, Maine, has sent us some hints on growing winter squash and the delicate summer squash, of which he says: "I like them better than candy".

If anyone is going to plant squash, or cucumbers, there is no need of ploughing and harrowing the whole patch, then planting hills nine of ten feet apart both ways. Just dig holes nine or ten feet apart on centres, and use them to bury garbage in until they are filled up.

Mow between the hills, or run a tiller between them before the vines get to running. I had one hole, where I had blasted out stumps, six feet in diameter, and I dug deeper into the hardpan, so that moisture would stay there.

I used it to bury garbage, seaweed, humus, manure and leaves. For three years I grew 25 squashes a year in it. I use sheet metal on the ground, weighed down, for two years. This kills out what is under it. I am uncovering some that have been buried for four years this year.

After World War II I decided I was going to find out what were the best materials to make humus from for different plants, because I always believed humus is the only fertilizer for any plant.

I accidently found something that makes potatoes, squash, pumpkins and rutabaga turnips really grow. I tried it with tomatoes, but it only caused them to have more flavour. A tomato plant has to have some organic material mixed with what has turned to humus, or the plants won't grow fruit.

I read of people using corn cobs, but when I tried them the plants did not yield any more; but I decided it was because I had used some corn cobs that had been cooked.

The substance I discovered is the membrane that the seeds of squash and pumpkins are attached to. It will ruin corn if it is under it; so don't use it unless you want to try it under a hill to see what it will do.

I have chopped up the matured yellow summer squash, either straight, or crook-necked, mixed them with earth, seaweed and garbage in the fall (autumn). The next spring I put a little on the ground, a handful, put a whole potato on it, and a handful or two over and around it, then buried it with earth.

When I harvested them I had 12 to 16 potatoes instead of three or four red early potatoes. They will have long stems, so they won't be crowded. It is a good idea to pick the first ones out of the top of the hill during the summer, because they become hollow if they grow large. We never liked the matured summer squash or mashed squash, because they are watery or soupy.

I have eaten the small ones raw, but we generally slice them up, peeling and all, dip them in egg batter, roll them in flour, and fry them — I like them better than candy.

One evening I gave a bowlful to a man who was real tired, and 15 minutes after eating them, he told me he was rested, or felt that way. I have chopped up those summer squash and put them in furrows, covered them up and buried potatoes in them the next year and got good results.

I believe the membrane is a growing food for the seed, providing the squash or pumpkin is never picked and goes back into the ground.

Rodents eat most of the seeds, so they won't be too thick. I have some aluminium I never got around to using, so I laid it on the ground and piled swamp hay on it. At the end of a year and a half there was nothing growing under it and the sod was turned into humus.

In planting winter squash, hills are nine feet apart, so I find there is not so much work in digging holes, filling them up with something that will make humus, with some membrane where the seeds are planted.

I find that beans, planted with potatoes, will keep them from being scabby.

I never got cantaloupe to grow until I buried all the parts I did not eat in the garden and planted the seed there the next year. They grew, but the animals ate them before they were ripe — vines and all.

I have only stated what I have found out about the membranes and there is plenty of experimenting to do with it on other plants, that your readers might like to try.

I came home after WWII, bought a wood lot near the village and started building a house. I've often thought of emigrating to New Zealand or Australia, but thought it was not allowed.

Yours truly, Otis R. Dow, 123 Townsend Avenue, Boothbay Harbor, Me. 04538, USA.

Seaweed and the soil

A naturally occurring substance can improve the performance of race-horses, add a sheen to the coat of a goat, produce a redder claret and help fowls lay hard-shelled eggs with richer yolks.

Seaweed extract is that substance, says Mr Jocelyn Chase, export director of Chase Organics (Great Britain) Ltd, of Shepparton, England. Mr Chase, who recently visited Australia, elaborates on seaweed extract in an interview with EARTH GARDEN.

What made you interested in organic gardening so many years ago?

My profession — my father started a gardening firm in 1912 and we made cloches, which are miniature greenhouses and we added greenhouses and frames and other gardening accessories.

During the War I realised that if we were to go very much further we must have our own market gardening trial grounds. When we had them I realised that for intensive cultivation it wasn't good enough to rely on artificial fertilisers. So we started using large quantities of compost which we made ourselves, based on water weed from a local canal and using coffee grounds and all the residues from the garden. This was during the War, and for the five years after the War.

Then, in the early 1950s, we got interested in seaweed. We felt that this was very much better than the water weed we were using and we added this to the products which we were selling. Then in 1961, I felt that interest in cloches was diminishing, because they were meant really for amateurs to grow vegetables in their gardens, and in England the amateur stopped growing vegetables in his garden. He went out for the weekend in his car, or he put his feet up on the mantelpiece and watched television, and he changed his garden over to lawns and shrubs and a few roses, and so the demand was diminishing.

The commercial demand was diminishing, too, because so many imports were coming in from Holland and France that the vegetable grower in England couldn't really make a very good show of it. So, in 1961, I liquidated my company, which had been going since 1912, and formed a new one which dealt solely with organics. We sold nothing but organics.

Do you think there is now a resurgence of people growing their own vegetables?

Oh, there is now. It's very different now. In America and in England there's certainly a resurgence towards growing vegetables.

I think there's several reasons why there is a resurgence. One is the general feeling that one should eat whole food and home-grown food. Secondly, I think that the food in shops is getting worse generally in England. Some of the soils are getting worn out through the overuse of artificials and transport is slower than it used to be, as it is in most parts of the world. Shop-bought vegetables aren't as attractive as they were in appearance and even less attractive in price. So, there's this return to growing food yourself.

I think this has been partially inspired by such organisations as the Soil Association and the Henry Doubleday Research Association and other similar associations, the Men of the Trees, Friends of the Earth and so on. I think, between them they've had quite a big influence. Now the situation is different. In my own case I've got away from the hardware and I'm concentrating on the organics.

The organics are centred on seaweed. Not only are we interested now in seaweed for crops, but also seaweed for animals, poultry and for human beings — the whole range. Our interest in composting still remains. We sell compost activators throughout the world. We've been selling QR for over 25 years now and sales are still increasing in every country.

We're also interested, now, in municipal composting. The firm is interested in improving the end product of municipal composting plants. I've got projects working now, particularly in Brazil, in Sao Paulo, but, in this country we're interested in the erection of new composting plants. I think it's a great pity that we don't have them here.

There are three ways of getting rid of garbage. One is to find a hole and dump it. One is to incinerate it and pollute the atmosphere. The third is to compost it. I think that the days are coming when all garbage will be composted because this is the age of recycling. Everybody wants to recycle things, and they don't believe that waste is right. Further, as organic gardening becomes more popular, so the demand for organic materials is rising and this is a very important source, which could produce a large proportion of the organic matter which is required for gardening.

In Auckland, they're very successful indeed and they produce a very good compost. And in Sao Paulo they're now turning out 300 tons a day which is all sold before it comes out of the machine. Although it has to be applied at a very high rate of something like 50 tons per hectare, some growers — some of the Japanese market gardeners — are actually collecting and transporting it 200 miles. So they must find it useful and valuable.

But you do get parts of the world where it's recognised that organic matter must be used. I remember in the Canary Islands, where they grow bananas, they don't believe in growing bananas inorganically, they believe in growing them organically. And there's no organic matter in the island, so they keep cows and the milk is a by-product. They have cows just for their manure.

We only have one abrasive question about seaweed. It was put to us after our article on macrobiotics in EARTH GARDEN 9. Do you think the seas are polluted and that this can affect seaweed?

Well, there are two parts to that. The first is that we don't know whether any toxic matter is taken up by seaweed. It could be that it has a resistance to taking up toxic matter.

There are three sorts of pollution in the sea. One is organic pollution, sewage and so on, which doesn't matter in the least as far as seaweed is concerned. The second is mineral pollution, and we know that that has affected fish in America and particularly in Japan — cadmium and mercury are probably the worst. But there is as yet no evidence that this is taken up by seaweed. My own opinion is that it's very likely that it isn't taken up.

The third type is the products of nuclear fission and that we just don't know about. I think that it's important to try to get seaweed from unpolluted coasts. That is what we have always done. We've found a strip of coastline in Ireland where there's no shipping, the west Atlantic coast, and we think there's less pollution there. I think one's got to remember the dilution of possible pollutants in the sea. The sea area is very much larger than the land area and I think that we're going to get far more pollutants and pollution on crops grown on land than you ever will get from seaweed.

I think that's probably so. But it isn't proved. Some day, somebody might come up and find that some particular thing actually was toxic.

Do you still have an interest in soil block gardening?

Occasionally, when people talk to me about it. In Brazil, about a year ago, I was talking to a professor who is the adviser to the municipality of the town of Sao Paulo ... he looks after the composting and the growing of plants. I asked him if he used soil blocks and he said, no, they'd never been introduced into his country, but he had some interest in it, and he'd got that interest from a book he'd read by some Englishman. He thought he'd got a copy in the next room, so he went away and fetched it. I was rather surprised to find a copy of my book in Brazil.

I didn't write that alone. I wrote it with a man who had patented a simple soil block machine — I think one of the simplest ones for amateurs, a hand machine. He was a nurseryman and had a great deal of experience. We used soil block machines in our own market garden, particularly for tomato plants, strawberry runners and so on. We found some new ones, so together we were able to knock together this book.

My interest has shifted a little bit to supplies of seaweed throughout the world, because the alginate industry is grabbing seaweed from everywhere for use for industry. It's used for paper making, confectionery and a great many non-edible products. I'm wondering whether this is quite right. I believe that in ten years or so there may be a reaction against this and the countries may say: "You can take so much of our seaweed for industry, but a proportion must be used for agriculture in our own country." I think that may easily happen.

Let's talk a little about the application of seaweed fertiliser here in Australia.

Well, since I've been here this time there are two particular interests which have arisen, apart from banana growing. The first is with vines. There I found the greatest interest, both in Western Australia and in South Australia. We visited some of the most prominent of wine makers, and I think they're all going to make trials. They have certain problems and I think that we can help them to overcome them. I think we can get them a better colour in their reds. I think we can raise the sugar content. I think in some areas where the cropping is very low we can increase the cropping. This is mostly where the quality is high and they haven't really tried very hard to increase the quantity because they're afraid that the quality will go down. But by using a regulator and a balancer such as seaweed you can increase quantity and maintain quality at the same time. That is what we're trying to do.

Mr J. L. Chase (left) and Mr Gordon Hutchinson.

The second interest is for pastures for pedigree stock. And there we found interest with dairy farmers and with racing stud breeders. I think that also we shall get the cattle stud breeders. There it really depends on the grazing rate. If the grazing rate is high, that is the grass is already supporting a good number of cattle, then it's economical. You put the seaweed into the grass and get the balance into the animals in that way. That's the best way of all.

But if you have a very low grazing rate, as you do in the wide open ranges in Queensland and Northern Territory and so on, then this is impractical because it costs too much. The cost per acre is the same whether it's a fertile soil or an infertile soil. But in many parts of South Australia and Victoria and New South Wales, where the grazing rate is about one animal per acre, then for breeding stock, pedigree stock, it's well worthwhile.

Further, I've been trying to encourage farmers to put aside what we call a convalescent paddock, where they put their animals that aren't doing so well, and keep that treated with seaweed, because I think that it will hasten the recovery of the animals and get them fit again.

In Britain there's a stud at Newmarket which has been using seaweed for four years on the whole of their paddocks and also, incidentally, using it in the form of seaweed meal for stallions, which don't come out into the grass. The whole appearance of the stud has changed. The animals that they're getting are far better than they ever were before, and they're just coming to the stage where they're beginning to win races.

There has been some fear among racehorse owners of using seaweed, because, when it's been fed at the very high dosage, it has apparently induced a goitrous condition in brood mares. I don't know how this can be, because goitre usually comes from a **shortage** of iodine, that's known, and the cure is to **give** iodine. Still, I can understand that if that's so, an excess might have the same effect. Anyhow, I found that this had happened when the dosage rate was about ¼lb a day. We give ½oz, so that danger just doesn't arise. In fact, with our blend of seaweed meal for horses, we found that the fertility fraction is the one which is very important. We're getting much better colts and fillies, much better results, and that is true of all dogs, sheep, cattle, pigs — the whole range. Always it shows first in better young, sometimes heavier at birth, but with more resistance to disease particularly and with a better performance as they grow older.

What about seaweed meal for smaller stock?

With poultry we have really had very great success in all countries. We started trials with layers and breeders in Chile, then in Brazil and then in Israel, where it's used for the whole turkey industry, and, lastly in Singapore, where there have been very large sales indeed for poultry and for pigs.

What we're trying to do with poultry is, in breeders, to produce more eggs and high hatchability, but above all, better chicks, which will have a better performance. With layers we don't feed the blend at the height of the laying season, that is for the first three or four months, but as soon as it begins to pall, then we feed it, and that keeps up the laying rate. One gets a yolk with a better colour and one gets fewer cracked shells and, in every case, one gets less disease.

I think even as an insurance against severe epidemic disease, it's very well worth feeding, although we consider that to be a bonus. With growers, we only feed for the first four weeks, the original mash, because if you feed until slaughter the slimming element in seaweed comes into play. A broiler is not a naturally raised bird, it's a stuffed bird, and therefore the regulator is trying to bring it down to the correct shape, but that doesn't do much good if you want to eat it.

When I was in Western Australia I met one goat breeder and one goat milk producer and they're both very interested. We've also got a user in Victoria who has improved the butterfat content and the solids-non-fat content and particularly the appearance of the animals. It has a great effect on the coat. It gives a better coat. Now it may not seem important that the coat can be improved with some domestic animals, but it is a symptom that the rest of the animal is in balance too.

For information on Chase seaweed products in Australia, send a stamped envelope to: Hutchase Enterprises, PO Box 53, Cremorne Junction, NSW, 2090.

survival

Australia's Aborigines had to spend much time and effort to make native plants edible. Most of the common wild vegetables and drugs are outlined in Maiden's **Useful Plants** and there is no more useful modern guide available.

We have already touched on some of these, for example Bursaria spinoza (the Tasmanian "Christmas bush"), the Kangaroo apple and pitcherrie in **Neil Douglas stalks the wild peanut (EG2),** and the Bunya Bunya nut (Araucaria Bidwilli) was described by Ilse and Gerd Lederman in **Shalom: the land of plenty (EG6).**

Other well-known edible bush plants are wild rice, macadamia nuts, Kurrajong nuts, cumbungi shoots and roots, New Zealand spinach, various grasses (like nut grass), wattle seeds (wattle is a legume) and bamboo shoots.

Pig-face, with its thick, juice-filled "fingers" is found in coastal sand-dunes and cliffs and yields a sweet, syrupy juice. The quondong is the native peach, its thin red fruit and wrinkled kernel are edible and so oily that they will burn readily. Can be eaten raw, stewed or made into a jam or jelly.

Banksias are the Australian honeysuckle, and a sweet drink is made by soaking the flowers overnight in water to extract their honey.

In the north there are wild bananas, paw paws, mangoes and cocoanuts and throughout the country, introduced "foreign" plants such as dandelions, purslane, rose hips, etc, well chronicled in European and American books on foraging.

Lichen boiled forms into a jelly-like food which has saved many lives.

The main principle would seem to be familiarity with the bush. Spend some time there getting to know the trees and plants. Check your hunches with books and bushmen. Beekeepers can also teach you a lot about trees and plants.

The Useful Native Plants of Australia, J. H. Maiden, The Technological Museum of NSW, Sydney 1889, 696 pp.

I recently came across this book in the Latrobe Uni Library. It is still a valuable reference for those intent on experimenting with our bush for food.

It covers topics such as human foods, food adjuncts, forage plants, drugs, gum, resin and kino sources, oils, perfumes, dyes, tans, timbers, fibres and a host of other miscellaneous things.

The book mainly relies on Botanical names, but the plants of your area can be checked with a host of references such as wildflower and tree books. Get a list from your State Herbarium ... you can also take plants there for naming.

But please be careful. All plants are biochemical factories, not intended for eating. They care not if you die from Hydrocyanic acid, alkaloid or other poisoning. Don't rely on hearsay either. A recent article in **The American Fern Journal** (Vol 63, No 3) discusses cancer induced by eating cooked bracken fronds, a practice of the Japanese for centuries.

Be warned, but not deterred. Nature is not put here for our convenience. We conceive it to be beautiful, but it is merciless!

JOHN ROBIN

NOW WE ARE THREE

Melissa at six weeks.

Melissa Ruth Smith
Born May 27, 1974

Melissa's arrival was timely, as we had hoped. On Friday night we left the completed art work for EARTH GARDEN 9 at our printer. On Monday morning at 6.25 our next issue had arrived — only 2½ hours after we got to the Queen Victoria Hospital at Annandale in Sydney.

She weighed 7lb 8oz and was 21 inches long. She has blue eyes and a gentle down of light brown hair. Now at three months, Melissa is a happy, healthy baby and brings us much joy. Her only "blemish" is a small one — a "strawberry" mark on her chin, which we are told will fade naturally in time.

My pregnancy was an easy one, free from any discomfort, aches, pains or morning sickness.

The birth was natural, without any anaesthetic, drugs or masks. This was because the last time I had a local anaesthetic at the dentist I died — my heart actually stopped beating — and I had to be revived by mouth-to-mouth resuscitation.

My doctor encouraged an uncomplicated attitude and told me that my body would respond to the birth as it should and that I would know what to do when the time came. I found later that this was true. Therefore I did not attend any pre-natal classes or do any exercises or breathing preparation. This may be a great help for other mothers, but I found it quite simple to adjust my breathing to fit into the rhythm and flow of labour.

My major preparation was reading Everywoman a few times and checking my development against the book's step-by-step descriptions of what to expect.

Keith was with me, though we hadn't planned this — it just worked out that way. The comfort and encouragement he gave me was terrific. I strongly advise any woman to have her man with her at this great moment.

Childbirth is different for everyone and the physical and emotional sensations are difficult to communicate. However, I feel that the secret is to have a healthy body, a good diet and to be happy and confident. It certainly worked for me!

Naturally, Melissa is being breast-fed. Breast feeding gives babies the best start in life. Mother's milk provides a free source of nourishment. It needs no preparation or sterilisation. It's convenient, easier and safer than synthetic formulas. Breast-fed babies are resistant to colds and flu and rarely have digestion problems.

Apart from mother's milk being the natural and "right" baby food, the bond of love, security and affection between the mother and her child is strengthened as the baby suckles, cradled safely in mother's arms.

Every mother should at least try to breast feed her baby. A bit of effort in the beginning is worth it at the end.

Thanks once again, for all your good wishes. People hoped we would have a pretty joey, a black lamb, a compost heap and a kid, but we're quite happy with our little honeypot, Melissa.

IRENE

EVERYWOMAN, A Gynaecological Guide for Life, Derek Llewellyn-Jones, MD, Faber and Faber paperback, London, 1973, 317 pp. At most bookshops. Our copy from Third World Bookshop, Sydney.

This book should be on every woman's bookshelf.

Professor Llewellyn-Jones, a Sydney gynaecologist and obstetrician, has written this excellent guide **for** and not **down to** women. It contains all a girl or woman wants to know about herself from puberty through childhood to menopause.

The approach is intelligent, but not technical. It is a good aid for schoolgirls and essential for pregnant women. The illustrated accounts of the likely experiences of pregnancy and childbirth are so complete and reassuring that I found it all the preparation I needed.

Let's Have Healthy Children, Adelle Davis, Signet Books, New York, 1972, 381 pp. Readily available. Our copy from Soil & Health Publications, PO South Warrandyte, Victoria 3134. Price $1.95, including postage.

Adelle Davis is a well-known American nutritionist, who believes that many common diseases are a result of poor eating habits. In this book she chronicles the frightening, irreparable baby disorders resulting from the inadequate diet of the mother.

Don't read this book if you are eight months pregnant and haven't been eating well.

However, it's a good book to read as a guide to diet for expectant or feeding mothers. I find Adelle Davis' use of supplementary pills and tablets excessive, but there's a lot to learn about the kind of nutrients your body needs and expects and the right foods and where they may be found.

Nature's Children, Juliette de Bairacli Levy, Warner paperback, New York, 1972, 174 pp. Our copy $1.25 (plus 20 cents postage) from Soil & Health Publications, PO South Warrandyte, Victoria, 3134.

Juliette de Bairacli Levy has chosen a Gypsy style of living. She tends her organic garden, eats mainly raw food and nuts, loves nature and wild animals and makes use of a wide range of herbs for health and medicinal reasons.

She is one of our few sources of information of the habits of the Gypsies and other primitive peoples. She is close to them and is able to pass on to the 'civilized' world their unwritten store of lore and knowledge passed down through every generation for centuries.

In Nature's Children, Juliette deals with pregnancy and childbirth, recounting her own experiences and those of the different 'peasant' peoples with whom she has lived. This book will make you question the methods and artificial 'comforts' of our modern medicine, which over-protects most pregnant women and their newly-born babes.

Apart from the inspirational value of the book, there are many herbal remedies for general stamina and well-being as well as the general run of childhood complaints.

As Juliette de Bairacli Levy says: "Let your food be your medicine, and let medicine be your food".

Baby and Child Care, Dr Benjamin Spock, Pocket Books, New York, 1968 (revised edition), 619 pp.

The ubiquitous Dr Spock. This is the world's most widely read handbook for parents on child care. Millions of children have been raised accordingly. Dr Spock helps parents through babyhood to puberty, dealing with the child's mental, emotional and physical needs.

Whatever your own thoughts on Dr Spock's own philosophy and the attitudes he expounds, don't really matter. His book is invaluable as a guide to **physical** development and ailments. When you are worried about what to do in a given situation, you reach for Dr Spock and find the facts clearly outlined.

This covers hundreds of possibilities, all of which could terrify the inexpert parent, such as fretting, vomiting, colds, colic, constipation, coughing, irregular breathing, rhythm and routine of feeding, measles, mumps, mealtimes, bathing and wind.

It's very comforting to know there is help at hand ... even at 3 am. Our copy is well thumbed already and will be quite tatty soon!

The Nursing Mothers Association of Australia, PO Box 230, Hawthorn, Victoria 3122. Membership $3.00 yearly.

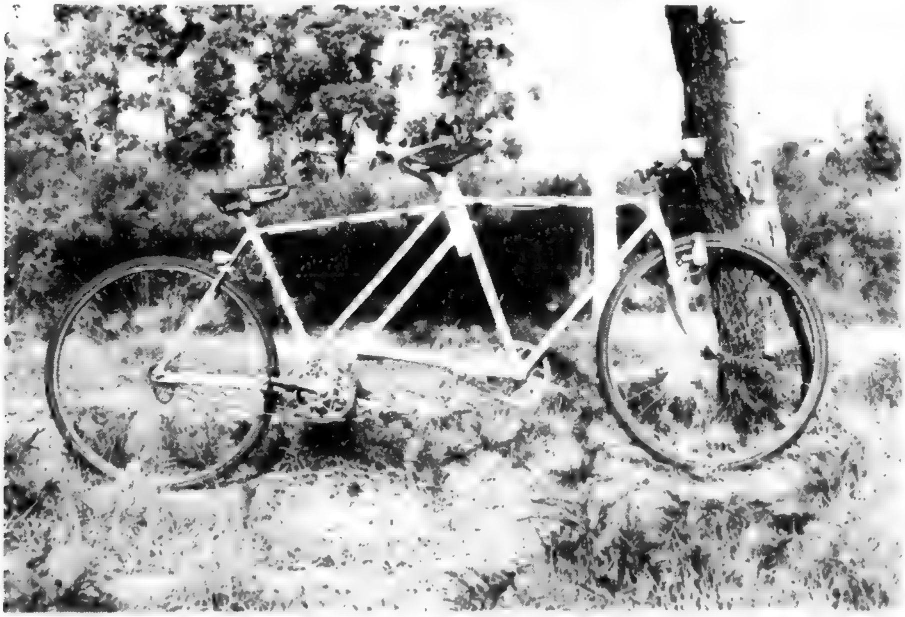
This group encourages, helps and educates mothers in the art and joy of breast feeding. They have booklets available on many aspects of feeding and child care, hold meetings in each other's homes, collect information and have a continuous, free telephone counselling service. They operate in all States and have many branches.

Breast feeding: Lyn Fuller and baby. PHOTO: John Lindblad.

The State Governments, through the Baby Health Centres (just about everywhere) provide an excellent, free service. We were taken there when we were babies and now we are taking our baby regularly.

Trained, experienced sisters give commonsense advice and resulting confidence to dozens of Mums each day. Babies are weighed, checked, and their ears, eyes and limbs tested. Food programmes are recommended and breast-feeding strongly encouraged.

A bicycle built for two



Ready to go with four-foot power — the completed Afrelymobile!

REPRINTED FROM
UNCLE AFRELY'S
EARTH GUIDE

Tandem building is a good buzz. Bzzzzzz. Bzzzzzz.

Anyway, here are the steps as we saw them:

1. Two bike frames were raked up. A little scratching and/or the use of the Trading Post achieved this end.

2. The front fork has to be hacksawed off the back frame. The struts between the seat and the back hub have to be removed from the front frame. The back forks are kept apart by a small bar. This may have to be removed on the front frame to bring the forks together for Weld 1. Other obstructions to Weld 2 must be hacked off as you see fit. The back handle-bars may have to be reversed to fit behind the front seat.

3. Welding:

Weld 1 connects back forks on the front frame to the front diagonal tube on the back frame. A clamp or some hammering may be needed to hold the forks on to the tube.

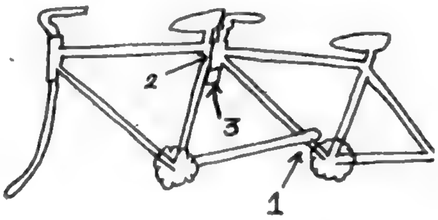
Weld 2: This is the main structural weld and should be done thoroughly. Cleaning off the paint first helps.

Weld 3: This makes the back handle-bars immovable. If you don't think this is necessary then we'll let you find out from experience. Most garages will weld for a few dollars if you can't find a friend with the necessary technological apparatus.

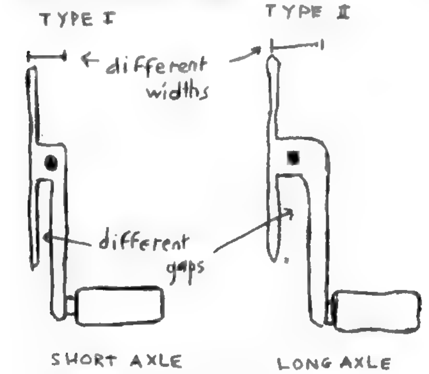
4. Attaching pedals:

Basically you have to overcome the problems as you encounter them, but our problems were caused by the fact that there are two types of pedal sprockets and associated axles.

We think this may be corrected with male and female bicycles respectively. Dragsters also have long axles. Since you have to fit two sprockets on the back part you will probably need a long axle even if you have sprockets of the first type. With a long axle you will need a sprocket of the first type for the left hand (from above) side.

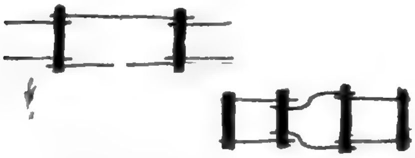


For the front pedals you don't necessarily have to have a long axle. If you do have a long one, you can fit a sprocket of type 1 on the left hand side. If you have a short axle, or a long axle with type 2 sprocket, you will need to take out the axle and reverse its direction. Much care is needed when taking it out and putting it back in properly — watch the ball-bearing, for if you don't, many problems — like pedals falling off — will occur later.



5. Putting on chains:

The back chain is the same as a normal bike. The front left hand side chain will be about 1 1/3 normal chain lengths. The extra chain can be broken down from a normal chain by punching out the connection between links. Then this has to be joined. There are a few combinations of how the links will meet, for example you may end up with (illust).



'1½' links, available at stores, can overcome some problems. The other problem may be that you have either an impossibly hard chain or a very loose one. Ours fitted exactly, but chains can be stretched.

6. Wheels:

The extra weight on the wheels of a tandem means an initial investment in new tyres and tubes is worthwhile to avoid monstrous blowouts. The tubes should always be inflated hard.

If you have a coasting hub with pedal brakes, the cones should be adjusted very well since the hub suffers much more strain than a normal bike. If you have a geared wheel, either the back person will have to control the gears or you will need to find an extra long gear cable. We don't know if these exist.

If you have hand brakes, either the front person has no control of the back wheel or you'll have to improvise a long brake cable because, from our experience, they can't be bought.

7. Painting:

We painted ours green to trick caterpillars. If you paint the wheel rims, sandpaper off the rust first.

8. Other problems:

We had a girl's frame at the back which, although convenient, was not strong enough. We had to add a crossbar.

Tandems seem to blow out lights, especially normal tail lights. We don't know why, but we put in higher wattage globes.

Not being mechanics we had problems — like pedals falling off, back wheel continually slipping, frame cracking (overcome with a good weld), pedal axles continually loosening and wobbling, and cotter pins wearing out. Most of these were due to the component parts being old.

9. Setting off:

Roll up your pants (the left leg on the front and both legs on the back). Hold the handle-bars firmly and set off to see the world with your friend. If you hear people saying "look at that", don't bother to see what they are pointing at — it'll be you!

Uncle Afrely's Earth Guide is available from Monash Association of Students, Clayton, Victoria 3168. Price just 50 cents posted.

Hurrah, hurrah, for the merry wheel,

With tyres of rubber and spokes of steel . . .

The bicycle boom of the 1890s conjures up a vision of husky young men with tweed caps and handlebar moustaches hurtling through sleepy villages and towns terrifying old ladies and horses.

Now bicycles are back in vogue, for the very reason that they provide a real and non-polluting alternative to the motor car.

Because they are efficient and built on a human scale they make little demand on materials and energy sources — and they are healthy!

It was John Evelyn, who wrote on gardens and the life of the times, who first spoke, in 1665, of friends at Epsom who made a "wheele for one to run races in".

The bicycle evolved from the wooden "hobby horse" of the British fops to the French velocipede ("boneshaker") of 1863, then to the Penny Farthing of the 1870s, with pedals directly fixed to the hub of the front wheel.

It reached its "standard" shape shortly after. Ironically, the popularity of the bicycle opened up the country roads, paving the way for the car. Bicycle technology played an important part in the evolution of the ball-bearing, pneumatic tyres, the motorcycle, aeroplane, battery lamp and the car itself.

Henry Ford's first car used bicycle wheels and chains, the Wright Brothers were bicycle makers, so were Leyland, Hillman, Morris and Olds.

The bicycle also played an early role in the liberation of women, clearing the way for "bloomers" and "sensible clothing" which allowed free movement for women cyclists.

To quote from S. S. Wilson, Scientific American, March 1973: "It (the bicycle) uses the right muscles (those of the thighs, the most powerful in the body) in the right motion (a smooth rotary action of the feet) at the right speed (60 to 80 revolutions per minute). Such a design must transmit power efficiently (by means of ball-bearings and the bush roller chain); it must minimise rolling resistance (by means of the pneumatic tyre), and it must be the minimum weight in order to reduce the effort of pedalling uphill".

Bikes are made for people. What we need now are special cycleways (as in Holland) to escape the danger of cars, pleasant cycle trails through parks and forests, bicycle parking areas and easy and cheap bike transport on trains, bus and ferry.

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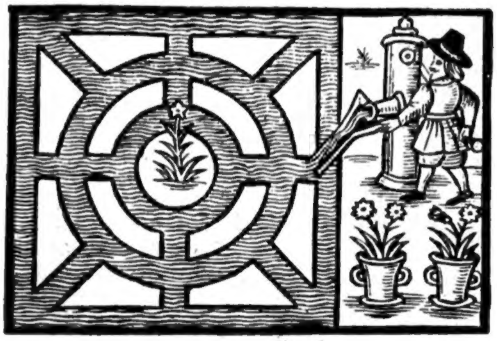

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